

SOAP

and SANITARY CHEMICALS



In this issue...

Soaps and detergents use
in industry is expanding
* * *

New trends in the market
for shaving preparations
* * *

Products needed to clean
Grand Central Terminal
* * *

Field testing of waxed
floors for slipperiness

Cover photo . . . Newest of the aerosol dispensed shaving creams is Seaforth's "Presto Shave" distributed by Alfred D. McKeloy Co., New York. The "Freon" propelled cream is dispensed from the brown metal can by pressing plastic on rubber base nozzle sideways. A white plastic cap fits over the nozzle. Bostwick Laboratories, Bridgeport, Conn., is the filler.

OCTOBER 1951

NYTRON FOR PERFORMANCE

REG. U. S. PAT. OFF.

because . . . NO OTHER WETTING AGENT-DETERGENT

MATCHES NYTRON'S COMBINATION OF PROPERTIES

Interested in better performance? Check this combination of properties—you'll find NYTRON does the job better!

- ☐ **Nytron Has Exceptional Detergency:** it is effective on an unusually wide variety of soils. NYTRON has excellent power to remove oil and grease from fabrics, surfaces, metal parts. It cleans efficiently in cold, as well as warm or hot water and retains its detergent action when used in either acid or alkaline mediums.
- ☐ **Nytron Counters Hard Water** difficulties; more economical because increased quantities do not have to be added to compensate for water hardness; completely prevents the formation of scum, grease rings, streaks, spots.
- ☐ **Nytron Remains Chemically Stable** over a wide range of temperatures, acidity or alkalinity.
- ☐ **Nytron Has High and Rapid Solubility;** it goes into solution almost instantly in hot or cold water and will not "salt out" in concentrated solutions of many acids, alkalies or metallic salts.
- ☐ **Nytron Rinses Thoroughly, Quickly** in cool or even cold water, does not leave an insoluble deposit.
- ☐ **Nytron Reduces Wetting Time** and effectively lowers surface tension, even in extremely low concentrations. It improves the action of acid and alkaline solutions over a wide range of temperatures.
- ☐ **Nytron Will Foam** in any normal concentration of acid or alkali, in distilled water or sea water, in ice cold or boiling water.
- ☐ **Nytron Improves Performance of Soap:** will improve quality and lower cost when used to partially or completely replace high-priced soap.

FREE SAMPLES...MAIL COUPON

A
SOLVAY
PRODUCT

SOLVAY SALES DIVISION

Allied Chemical & Dye Corporation
40 Rector Street, New York 6, N. Y.

I want to know more about NYTRON, the Synthetic Organic Detergent with the exclusive combination of properties. Please send me a free sample plus non-technical information and specific technical data.

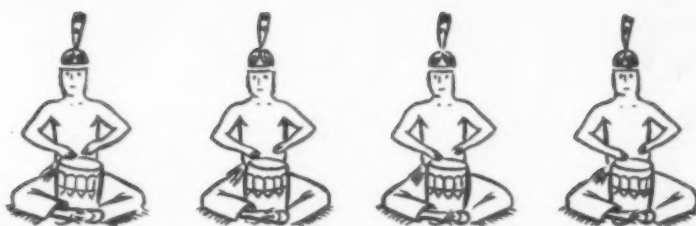
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City _____ Zone _____ State _____ SSC-10



Beat the drums for new, improved



COMP[®]

**A COMBINED
CLEANER . . . SANITIZER . . . DEODORANT
WITH A PHENOL COEFFICIENT OF 3.5 F.D.A.**

Blow the bugles and ring the bells, too! COMP is better than ever—both as a multi-purpose cleaner and as a sales-getter. We've raised the coefficient to 3.5 F.D.A. and added a powerful brightening agent. One cleaning with COMP solution sets floors and walls aglow with cleanliness.

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MANUFACTURING CHEMISTS
Warehouses in Principal Cities



INCORPORATED
702-710 S. WOLFE ST., BALTIMORE 31, MD.
West Coast Plant: Los Angeles, Calif.

OCTOBER, 1951

CAND-DOX^{**}

Candy's Wax
with LUDOX^{*} added

Candy's **NEW NAME** for

the new floor treatment for

Increased Anti-Slip

Greater Durability

Lower Floor Maintenance Cost

GRADES

CAND-DOX #CS

Originally offered as CANDY'S SUPREME
Special WR-AS in July 1950

CAND-DOX #BB

Originally offered as BRIGHT BEAUTY
Special WR-AS in June 1951

CAND-DOX #CS and BB are made in any total
percentage of solids 8% to 18% and in 24%
concentrate.

CAND-DOX #CS is slightly more durable and
higher priced than CAND-DOX #BB in like per-
centage of total solids.

CAND-DOX floor treatments represent the finest products available where a higher than minimum recognized standard of anti-slip quality is desired. The resultant films from the use of these products are **HARD**, non-tacky, and will withstand wear, dirt and discoloring traffic marks.

DURABILITY and ANTI-SLIP... CAND-DOX products include a compensating factor—LUDOX^{*}—in itself harder than wax. The addition of LUDOX^{*} to the proper wax bases, perfected purposely to accommodate this additive, causes a greater coefficient of friction and therefore greater safety underfoot.

WATER RESISTANCE and REMOVABILITY in proper balance are very important in every maintenance program. In the development of the wax emulsion bases that go into CAND-DOX floor treatments, the important all-around high qualities of our (Standard) CANDY'S SUPREME, BRIGHT BEAUTY and other well known and accepted waxes were taken into consideration and accomplished in the final CAND-DOX products containing the new bases plus additive.

BEAUTY of floors maintained with CAND-DOX floor treatments, which are both hard and very anti-slip, is no less than remarkable and equal to the lustre for which our products have long been famed. The same buffing can be applied, if desired, and the same gloss will result.

Our policy in regard to use of new additives to our floor waxes has always been clear-cut... if a definite improvement can be accomplished we endeavor to formulate and combine new ingredients in such a way as to conform to our very high standards of product function. These standards in no case are ever sacrificed to climb on any "band-wagon" of sales appeal.

The laboratory work in ours or any organization is very important and the starting point for research and development of new useful products. However, **FIELD TESTING** is the real proof of the real value of any floor treatment. CAND-DOX floor treatments have been thoroughly field tested and are now being sold in quantity by many of our distributors, with success—again proving merit in **FIELD USE**.

**** CAND-DOX** contains CANDY'S wax emulsion with LUDOX^{*} Colloidal silica added in such proportion as to fully deliver the usefulness of this additive to floor wax. *Trademark of E. I. du Pont de Nemours & Co., (Inc.) Reg. U. S. Pat. Off.

CAND-DOX is available only for private brand re-sale except for experimental accounts in Chicago essential to research.

Why not write us today for free samples and prices so that you can make your own **FIELD TESTS**?

The most complete line of water emulsion waxes of the highest quality available anywhere

CANDY'S SUPREME (Standard) CANDY'S SUPREME Special WR
CANDY'S DELUXE #CS CAND-DOX

BRIGHT BEAUTY (Standard) #BB CAND-DOX
CANDY'S #640

All the above CANDY products are listed by Underwriters' Laboratories as "anti-slip floor treatment materials."

Wax Specialists for over 60 years
Candy & Company, Inc.
2515 W. 35th ST., CHICAGO

SOAP

Volume XXVII

Number 10

October 1951

and SANITARY CHEMICALS

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DU PONT SODIUM

CMC

in heavy duty detergents

TO CLEAN
WHITE COTTON FABRICS
WHITE

Du Pont Sodium CMC (carboxymethylcellulose) gives a big sales plus at no extra cost to many synthetic detergent and soap formulations. It increases soil suspending action . . . prevents redeposition of dirt. Laundered fabrics, including white cottons, remain white. Fabrics dulled from repeated washing with soaps and detergents containing no CMC regain their brightness.

Yet production costs can remain the same, or may even drop. This is because part of the active ingredient can be replaced with a mixture of low-cost inorganic builders and Sodium CMC. For economical technical grades, specify Du Pont Sodium CMC. E. I. du Pont de Nemours & Co. (Inc.), Explosives Department—Chemical and Miscellaneous Sales, Wilmington 98, Delaware.



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SOAP and SANITARY CHEMICALS

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CUSTOMERS

MORE

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- 2 Safety — Anti-Slip
- 3 Wax Solid Content
- 4 Spread-Ability
- 5 Water Resistance
- 6 Mar Resistance
- 7 Wash-Ability

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some territories available in some states.

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Telephone: W0odlawn 3-2742

Approved by: RUBBER FLOOR MANUFACTURERS ASSOCIATION



and LESS

- 1 Drying Time
- 2 Ash Content
- 3 Softening
- 4 Sedimentation

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(State)

is open for ☐ Distributorship ☐ Sales Representation.

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Calmar atomizers

**save money, yet actually
improve your package**
with refreshingly new pastel colors.
Compare Calmar's non-plugging,
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snow white polyethylene mounting
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Complete assembly includes match-
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**most important value
ever offered!**

to manufacturers of Room Deodorants, Hair
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choose from package appeal pastels

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Manufacturers of Calmar Sprayers, Dispensers and Atomizers

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in Selected Territories...**

**to climb aboard one of the
HOTTEST PRODUCT
PROMOTIONS
in Sanitary Supply History!**

... here's the Product!

A product that **REALLY** removes the **SOURCE** of toilet-room odors and infectious disease germs... has always been top-dog demand in this business. That **SOURCE**, as you know, is the smelly crust, stains, rust and organic deposits in the flush ring of toilet bowls—in the traps—in the invisible outlets of urinals.

At long last, you have a product that **TOTALLY** eliminates this odor-disease-germ source and crab lice shelter. **ZAX**—with free bowl mirror and mops—**DOES IT!** It's the revolu-

IT SIZZLES!—because it is currently the most wanted single item in the entire sanitary supply field—**BAR NONE**

tionary **SUDSING**, white emulsion **DISINFECTING** bowl sanitizer that *swabs off the noxious crust* by instant *chemical action*. It deodorizes, descales, cleanses, disinfects... replaces harmful single-action acids that neither get rid of the disease germs nor remove source odor.

The **ZAX DEMONSTRATOR KIT**—see below—proves before the prospect's astonished eyes that **ZAX** does what no other bowl product can do. Proves it in minutes—to clinch the sale. After that

ZAX repeats and repeats and repeats!

Zax
4-WAY
BOWL SANITIZER



... here's the Promotion!

There is more brain power, **SALES POWER**, push and **PROVEN SUCCESS** in this **ZAX PROMOTION** than anything you or we have ever seen in the last

two decades. The **NATIONAL ADVERTISING**—in color—reaches exactly the profitable institutions—the schools, cafes, government, hotels, hospitals and industrials you sell. It spreads out the **WEL-**



COME MAT for your salesmen.

The **smashing DIRECT-MAIL CAMPAIGN**—a tested-out masterpiece of successful salesmanship—is given to you **FREE**—with your name and address imprinted. We not only show you how to get business by mail, but **WE DO IT FOR YOU**.

The **Proof-of-the-Pudding** **DEMON-**

STRATOR KIT—with mop and bowl mirror—closes by *actual count* **BETTER THAN 4** out of 5 rabbit-quick demonstrations. As a door opener to get your line in, to sell buyers you never could interest before, to hire and hold better salesmen... this demonstrator kit—backed by the **FREE ADVERTISING**—outranks any past success in sanitary supply history. That you will prove at our risk. But first, **SEND FOR BROCHURE**.



... here's the Brochure!

It **wraps up** the whole promotion quick and clear. When you get it you will see the biggest eyeful of money making merchandising ever presented in a single package. If you paid \$50 for this brochure as a



IT'S FREE!
—and worth its weight in gold!

blue print for sanitary supply merchandising it would be a bargain. Get it free—**IF YOUR TERRITORY IS OPEN**. Wire, telephone or **CLIP THE COUPON**. We'll send the brochure by return mail.

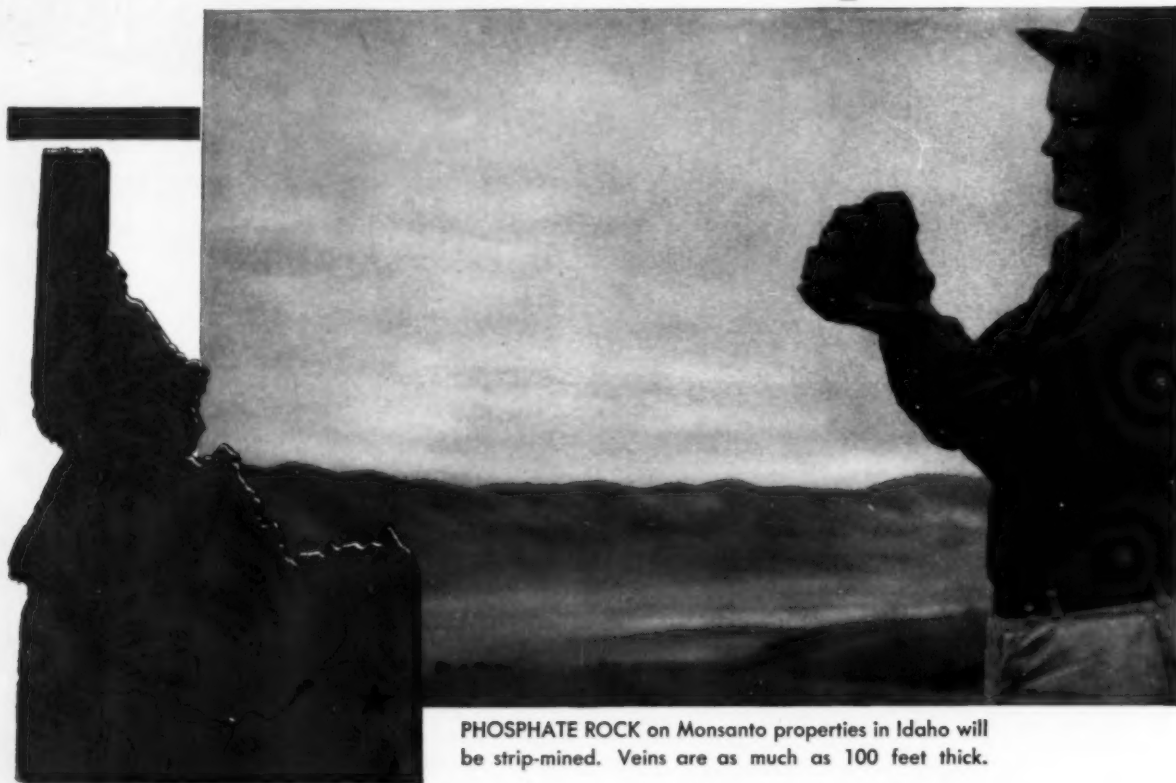
Clip this
to your Letterhead

To: **HYSAN PRODUCTS COMPANY**
932 W. 38th Place
Chicago, Illinois

SEND THE BROCHURE

Our territory is.....
Company.....
Street.....
City.....
By.....

MONSANTO Expands



PHOSPHATE ROCK on Monsanto properties in Idaho will be strip-mined. Veins are as much as 100 feet thick.

Monsanto, already the world's largest producer of elemental phosphorus, has added extensive holdings of phosphate rock near Soda Springs, Idaho. To extract elemental phosphorus of better than 99.9% purity from this rock, Monsanto is constructing a large electric furnace plant at Soda Springs, Idaho.

The output of this furnace plant, available next year, will substantially increase Monsanto's production of elemental phosphorus. It will mean more phosphoric

acid and its derivatives for myriad industries using such products.

Elemental phosphorus from the Soda Springs furnace plant will travel by rail to Monsanto plants in Monsanto, Illinois; St. Louis, Missouri; Trenton, Michigan; and Anniston, Alabama; where it is converted into pure phosphoric acid and numerous phosphates serving hundreds of industries. Expansion of manufacturing facilities at these processing plants is under way.



SINCE 1927, Monsanto has been producing elemental phosphorus at its Monsanto, Tennessee, plant and today there are six large electric furnaces in the Monsanto, Tennessee, installation shown at the left. Monsanto originated the present-day method of large-volume elemental phosphorus production and was the first to ship the element in bulk-car quantities.

Phosphorus Production

**MORE PHOSPHORUS = MORE PHOSPHORIC ACID
MORE PHOSPHATES
MORE PHOSPHORUS DERIVATIVES**

Phosphorus Pentoxide

Phosphorus burned in dry air produces phosphorus pentoxide from which these products are derived:

Methyl Phosphoric Acid
Ethyl Phosphoric Acid
Propyl Phosphoric Acid
Butyl Phosphoric Acid
Amyl Phosphoric Acid

ELEMENTAL PHOSPHORUS

Phosphorus burned in moist atmosphere produces phosphoric acid used in various industries and from which sodium phosphates, calcium phosphates, ammonium phosphates, potassium phosphates and numerous other phosphates are derived.

Phosphorus Trichloride

Phosphorus plus chlorine produces phosphorus trichloride from which the following are derived:

Triethyl Phosphate
Phosphorus Oxichloride
Triethyl Phosphate
Tributyl Phosphate
Trioctyl Phosphate
Tricresyl Phosphate
Triphenyl Phosphate

Mono Sodium Phosphate

Uses:
Acid Cleaners
Water treatment
Textiles

Di Sodium Phosphate

Uses:
Cheese
Leather
Textiles
Detergents
Water treatment
Dye
Pigments

Tri Sodium Phosphate

Uses:
Water softening
Detergent
Metal cleaning
Water treatment
Textiles

Tetra Sodium Pyrophosphate

Uses:
Soap
Textiles
Detergents
Clay dispersant
Dyeing
Bleaching
Pitch control
Metal cleaning
Oil well drilling
Water treatment
Water softening
Glass

Sodium Acid Pyrophosphate

Uses:
Baking powder
Oil well drilling
Electroplating
Prepared flour

Mono Calcium Phosphate

Uses:
Baking powder
Self-rising flour
Self-rising corn meal
Prepared flour
Food enrichment

Di Calcium Phosphate

Uses:
Tooth paste
Tooth powder
Food enrichment
Pharmaceutical

Tri Calcium Phosphate

Uses:
Tooth paste
Tooth powder
Anticaking agent
Food enrichment
Pharmaceutical

Tetra Calcium Pyrophosphate

Uses:
Food enrichment
Pharmaceutical

Sodium Polyphosphate

Uses:
Oil well drilling
Textiles
Water treatment
Detergents

Sodium Tripoly Phosphate

Uses:
Detergents
Pitch control
Metal cleaners
Water treatment
Clay dispersant

Uses:

Soft drinks
Rustproofing
Metal cleaning
Gelatin
Jelly and preserves
Silage treatment
Fertilizer
Textiles
Sugar
Pharmaceutical
Water treatment

Mono Ammonium Phosphate

Uses:
Flameproofing
Yeast
Malt
Plant nutrient
Acid cleaners

Di Ammonium Phosphate

Uses:
Flameproofing
Yeast
Plant nutrient
Ammoniated dentifrices

Mono Potassium Phosphate

Uses:
Pharmaceutical
Plant nutrient

Di Potassium Phosphate

Uses:
Fermentation
Pharmaceutical
Nutrient solutions

Tri Potassium Phosphate

Uses:
Oil refining

Tetra Potassium Pyrophosphate

Uses:
Soap
Textiles
Water softener
Synthetic rubber manufacture

Iron Phosphates

Magnesium Phosphates

Aluminum Phosphates

Barium Phosphates

Beryllium Phosphates

Copper Phosphates

Lead Phosphates

Lithium Phosphates

Silver Phosphates

Zinc Phosphates

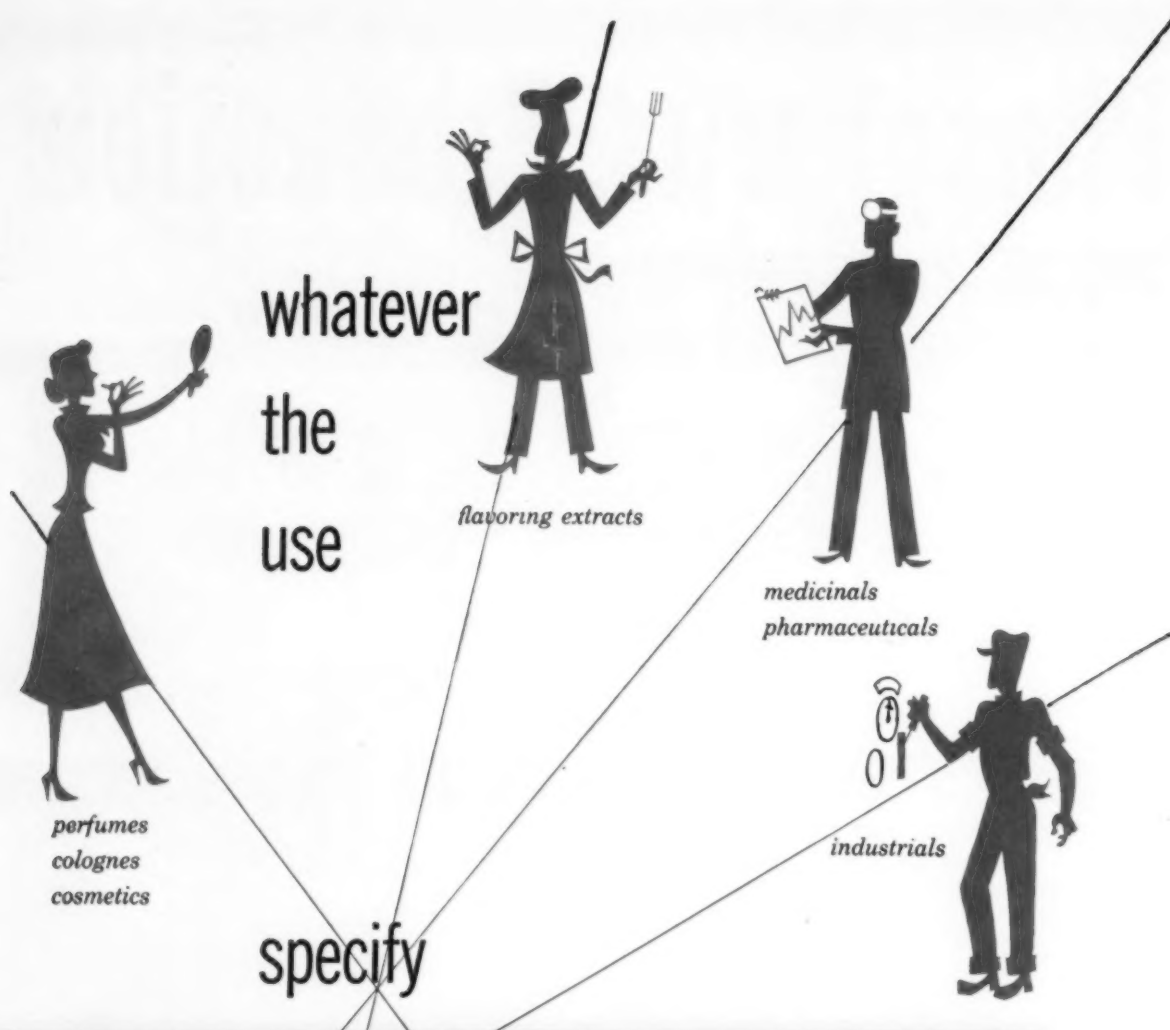


SERVING INDUSTRY . . . WHICH SERVES MANKIND

FOR INFORMATION on Monsanto's chemically pure phosphoric acid and phosphates, contact the nearest Monsanto Sales Office or write MONSANTO CHEMICAL COMPANY, Phosphate Division, 1700 South Second Street, St. Louis 4, Missouri.

★ ★ ★

DISTRICT SALES OFFICES: Birmingham, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Portland, Ore., San Francisco, Seattle. In Canada, Monsanto (Canada) Ltd., Montreal.



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Rossville Hexagon® Cologne Spirits... Rossville Algrain Alcohol U. S. P.
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SOAP and SANITARY CHEMICALS

Investigate the advantages of new lauryl sulphate

sipon
detergents

SIPON lauryl sulphates, when used as surface active agents, exhibit outstanding detergent, foaming, wetting and emulsifying properties under all conditions. Neither temperature variation nor the presence of inorganic salts (as in

hard water) materially affect performance. Shown below are only a few of their more general uses. In addition, special grades of SIPON are available to meet specific requirements.

SIPON L-20

Ammonium
Lauryl Sulphate

SIPON LS

Sodium
Lauryl Sulphate

SIPON LT

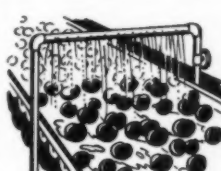
Triethanolamine
Lauryl Sulphate



Dishwashing Compounds



Car Washing



Fruit & Vegetable Washing



Pet Shampoos



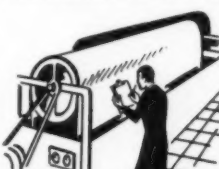
Liquid & Creme Shampoos



Waterless Paste Detergents



Rug Cleaning



Textile Washing & Dyeing



Bubble Bath Compounds



Household Detergents



Upholstery Washing



Medicated Soaps

"There is a SIPON to meet every detergent need"

TECHNICAL SERVICE,

including formulae for finished products, is available. Do not hesitate to take advantage of the services of our technical staff. Write now for descriptive literature and prices.

SIPON

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For your worst enemies



a CONCENTRATION CAMP!

The NULLAPONS*

nullify

SCUM
WASTE
RANCIDITY
CLOUDINESS
DISCOLORATION

by sequestration

Magnesium, calcium, iron, copper, zinc, nickel, chromium and lead—these are the more common interfering metals—interfering with processes in which water is involved, impairing the quality of the products thus processed.

Through sequestration—with the help of a Nullapon—the action of these trace metal ions can now be nullified. For all practical purposes, they are locked up in an inert complex.

The applications to the soap industry thus far established include: softeners

for hard water; sequestrants for polyvalent metal ions in soaps, detergents, shampoos, shaving creams, germicides, etc.; clarifiers for liquid soaps and shampoos; antioxidants or inhibitors of rancidity and discoloration in soap oils and fats; foam builders for soaps and detergents.

For our technical bulletin—and for information regarding our new test kits for determining water hardness—we invite your inquiry, addressed to Department SSC-1051.

* NULLAPON—Reg. U. S. Pat. Off.

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**FOR Quality THAT BUILDS
CUSTOMER SATISFACTION
AND REPEAT PROFITS...**

Feature **PURO** *Deodorants*

MORE ECONOMICAL... LONGER LASTING

MADE OF 100% PURE PARADICHLOROBENZENE FUSED
WITH FINE LONG LASTING PERFUME OILS ON HUGE
MODERN POWER PRESSES. ATTRACTIVELY PACKAGED!



**OUTSTANDING SELLER
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BLOCKS—**

Most popular size and shape, for urinals and general use. Made to U. S. Navy specification No. 51-D-23 (Int.). Attractive cellophane wrap and special tube containers protect from evaporation. Available in pleasant Surf, Lilac and Rose colors. Economical — long lasting.



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THIS EXCLUSIVE SPECIALTY**

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DEODORANT—**

..... Banishes odors at their source. Patented "Snap-on" wire hanger holds cake securely in bowl and practically out of sight. Delicate flower-like fragrance. Ideal for home, hotel and public toilets — a much larger market than urinal blocks. A sensational repeater, 4 oz. cake.



**NEW HEAVY DUTY
HANGER BLOCKS**

**PURO JUMBO DEODORANT
BLOCKS—**

By popular demand, now available in 8, 12, 16 and 24 oz. cakes which are effective longer over a larger area. The three larger blocks come in convenient hanger containers. Cellophane wrap prevents evaporation before use. In clean smelling Surf, Lilac and Rose.

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(Established 1929)

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and improve the quality
of your products...



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Let us assist you in determining whether or not Sulframin E is fitted for your requirements. And, if it is, let us help you determine the most satisfactory formula for your operation. Write or telephone today!

* Trademark Registered U. S. Patent Office



ULTRA CHEMICAL WORKS, INC.

HAWTHORNE, CALIF.

PATERSON, N. J.

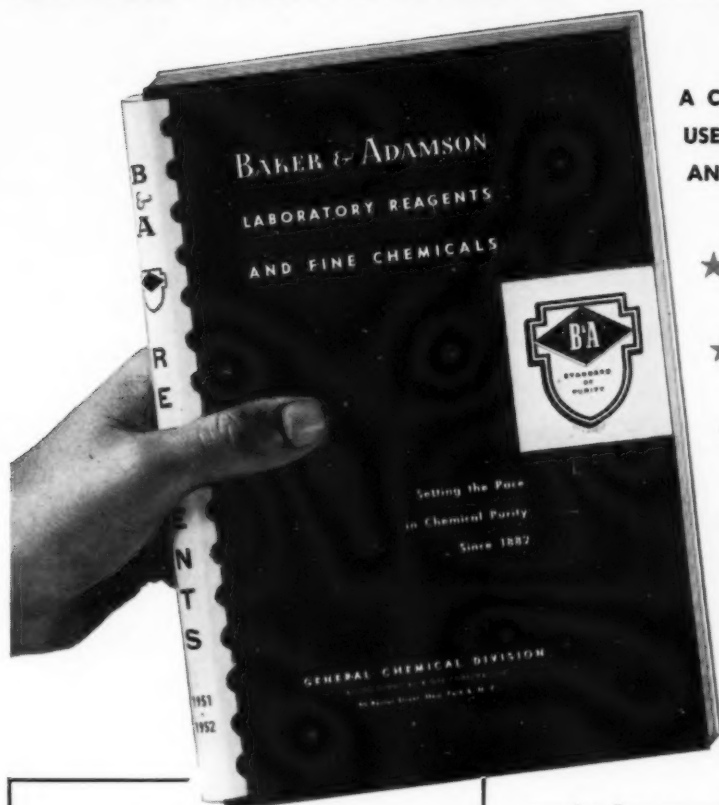
JOLIET, ILL.

ONE OF THE BASIC MANUFACTURERS OF DETERGENTS IN AMERICA

Announcing...

THE BIG NEW 1951-52

B & A CATALOG of Reagents & Fine Chemicals



A COMPLETE BUYERS' GUIDE FOR
USERS OF LABORATORY REAGENTS
AND FINE CHEMICALS

- ★ For Manufacturing Control Laboratories
- ★ For Production Requiring Quality Chemicals
- ★ For Process Planning and Development
- ★ For Research Laboratories
- ★ For Educational Laboratories

Packed with helpful information

STORAGE AND HANDLING: Special section gives helpful "do's and don'ts" on handling chemicals that require extra precautions.

PACKAGING SECTION: Exclusive new feature—photographs and full details on major B&A packaging, including:... the "PBL" Drum with polyethylene liner, the 9-bottle case for reagent acids, the 6-½ gallon carboy, the "Saftepak" plastic dispenser for HF, and many others.

EXTENSIVE DATA: Over 230 pages of specifications, other pertinent data on B&A Reagents, also on many Fine Chemicals.

Just off the press—Baker & Adamson's new 1951-52 Catalog is profusely illustrated . . . packed with 264 pages of important information. Gives clear, concise data on over 1,000 B&A Laboratory Reagents and Fine Chemicals! Includes such pertinent facts as grades, strengths, maximum limits of impurities, etc. If you buy or specify laboratory reagents, this new 1951-52 B&A Catalog belongs on your desk. Send for your copy today.

**Write
Today**

Fill out coupon, attach to your business letterhead and mail today. Free to all qualified users and buyers of reagents.

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ALLIED CHEMICAL & DYE CORPORATION
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W. C. Hardesty Co., Inc., for 25 years a dependable source of quality products, is now reinforced by the extensive research facilities of Novadel-Agene Corporation and its affiliate, Wallace & Tiernan Co., Inc.

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For better compounds, use the tested best!

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Compounds containing D-40 are being used throughout industry for everything from metal cleaning to fruit and vegetable washing. Get full information from any of the Oronite offices listed below.

Detergents from Oronite have proved their performance and quality in household and industrial cleaning compounds of all kinds. Continued and growing use by leading processors, compounders and re-packagers proves the efficiency and dependability of our detergent materials.

When you switch to detergents made by Oronite, you're getting the tested best.

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Household Cleansers

In scouring cleansers, compounders find D-40 makes their products better and faster cleaners.



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An excellent wetting agent, as well as detergent, D-40 in dairy equipment cleaning compounds helps prevent the formation of milkstone.



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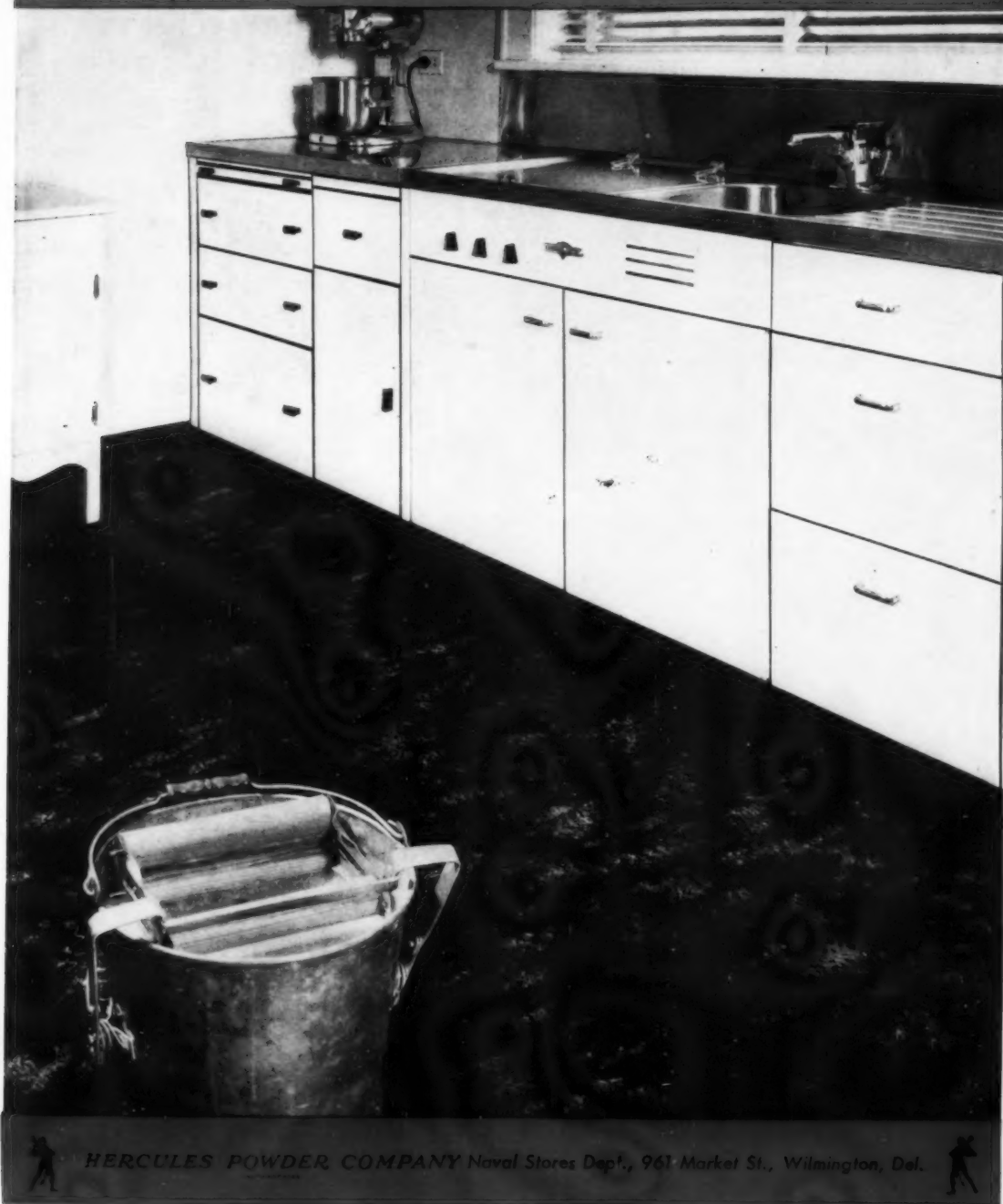
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intermediate
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A typical
description of
Jefferson
Nonyl Phenol
is:

Specific Gravity, 20/4°C	0.949
Hydroxyl Number	255
Color, Pt-Co Scale	200
Refractive Index, 20° C	1.5140
Flash Point (TOC), °F	300
Distillation Range, °C (Modified ASTM)	
IBP	290.0
5 ml.	293.0
50 ml.	295.0
95 ml.	296.5
EP	298.0

You may secure technical information and experimental samples for research and product development by writing (on your company letterhead, please) to our Market Development Division, Dept. E.

*A Jefferson ethylene unit (purification section),
Port Neches, Texas.*



Jefferson Chemical Company, Inc.

711 FIFTH AVENUE, NEW YORK 22, N. Y.



ESSENTIAL CHEMICALS FROM HYDROCARBON SOURCES

ETHYLENE OXIDE
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Briefs

From recent literature

Detergents which exhibit little or no corrosive action on automatic washing machines result when nonyl phenol polyglycol ethers are built with sodium silicates in addition to such materials as phosphates, carbonates, and carboxymethyl cellulose.

Pour Depressors for waxy lubricating oils are formed by acylating nonyl phenol or dinonyl phenol with dibasic acid acylating agents.

Automobile radiators are cleaned efficiently by employing an emulsion of orthodichlorobenzene and kerosene in strong hydrochloric acid. The emulsion is stabilized with a nonyl phenol polyglycol ether. The cleaner is effective against rust and grease and causes little or no corrosion.

Synthetic waxes suitable for use in greases, polishing compositions, and lubricating oils consist of soluble, fusible nonyl phenol—formaldehyde condensation products which have been reacted with higher fatty acids.

These developments are abstracted from recent publications or U. S. patents. They may suggest other applications of Jefferson Nonyl Phenol in your products or processes.



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\$5.75 per trial lb.*

More economical than Ylang Ylang and Cananga, and faithful to the character of the natural oil. (Particularly well suited for use in white soap.)

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3.50 " " " *

SUBSTITUTE 4980

*Prices subject to change without notice

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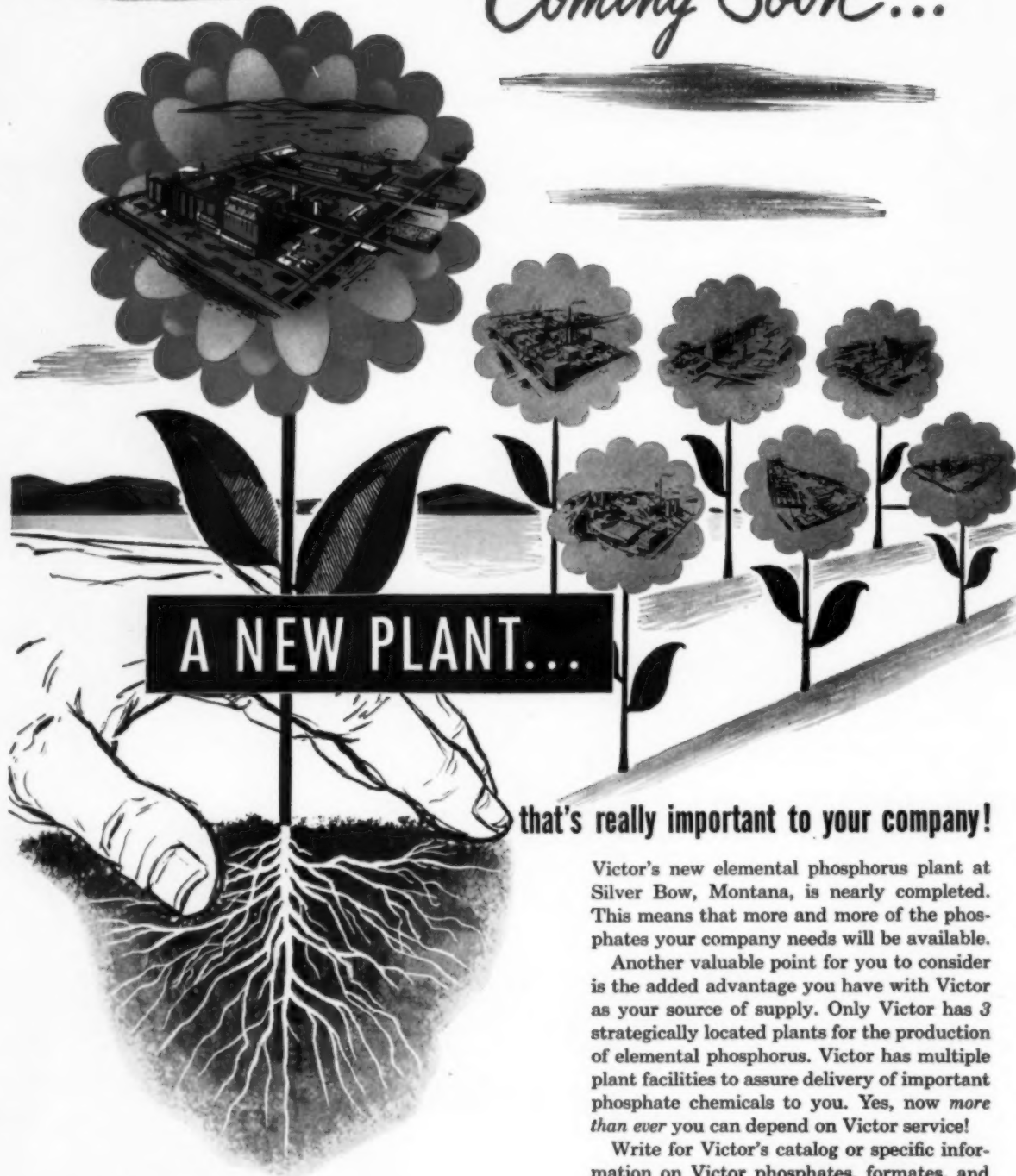
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SNOWFLAKE CRYSTALS is a true sesquicarbonate of soda made by Solvay. A beautiful, snow-white, crystalline product of top quality and purity, SNOWFLAKE CRYSTALS has been used for over 50 years by America's foremost compounders and repackers. Solvay Technical Service is available to help you with any problems regarding your formulae. Contact the nearest Solvay office; there's no obligation.

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Eliminate Rancidity!

with

OXIDATION-RESISTANT Emersol Stearic Acids

**PEROXIDE VALUE* TESTS SHOW
AMAZING STABILITY
OF EMERSOL STEARIC ACIDS!**



Don't take chances with just any stearic acid . . . get an Emersol Stearic Acid and insure highest possible stability, as shown first by oxygen absorption tests, which proved them to be (depending on grades) from 2-5 times more resistant than competitive types. And now peroxide value tests during aging, again illustrate their superior resistance to oxidation, which means superior resistance to rancidity.

Emersol Stearic and Palmitic Acids Make Quality Products Even Finer!

Remember . . . the stability of your products depends largely upon the stability of the fatty acids used! Join the changeover and be sure your products exhibit the highest resistance to

color, odor and oxidation degradation at no extra cost. Buy Emersol Stearic and Palmitic Acids and be sure that your products have that fresh, natural appeal, and that they keep it longer!

*Peroxide Value indicates the quantities of peroxides, which are present in fatty products as the result of oxidation reactions. Therefore, lower peroxide values indicate greater resistance to oxidation.

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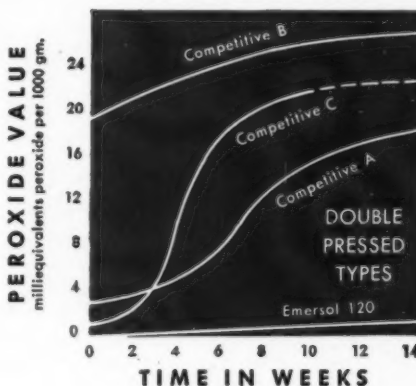
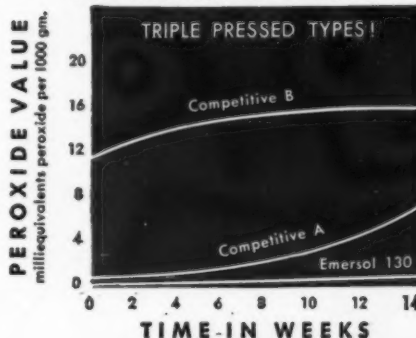
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Representatives:

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Ecclestone Chemical Co., 2673 Guin, Detroit 7, Michigan

PEROXIDE VALUE DATA

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GET ALL THE FACTS ABOUT EMERY'S SOLID FATTY ACIDS!

Emery Industries, Inc.

Dept. S-10 • Carew Tower, Cincinnati 2, Ohio

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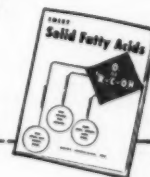
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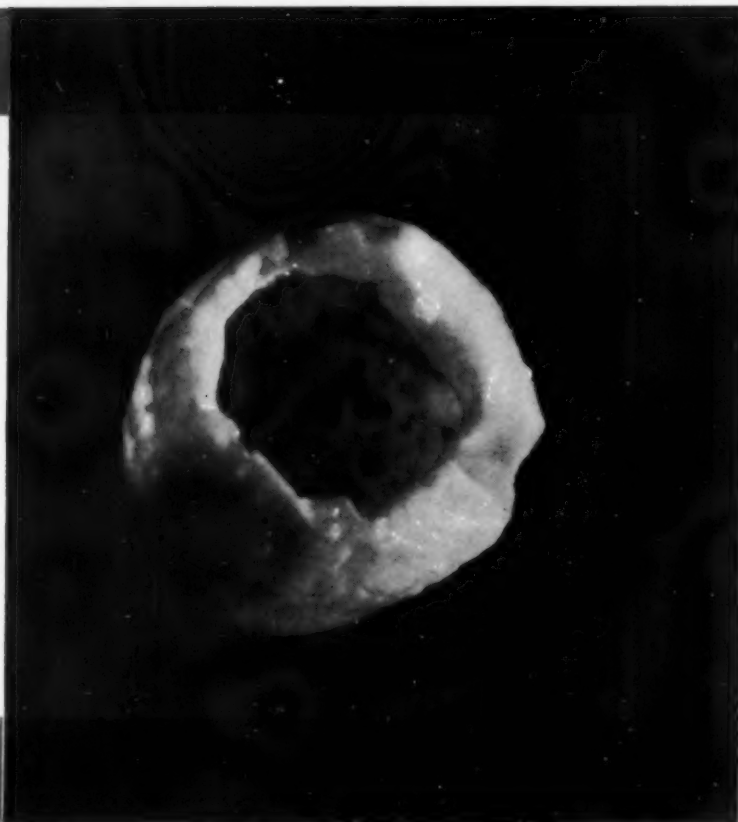
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Magnification of an ULTRAWET SK bead.

**COMPOUNDING
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*Look into
ULTRAWET SK*



ULTRAWET SK was developed with the compounder's problems in mind. One material to serve two purposes.

Its bead form lends itself perfectly to merchandising as is in light-duty applications—car wash, dishwashing, etc. ULTRAWET SK comes in regular and high densities to suit the container that you plan to use. Common to both densities is the whiteness of the beads—a definite plus value without added cost.

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For technical information and co-operation, write The Atlantic Refining Company, Chemical Products Section, Dept. D-5, 260 S. Broad St., Philadelphia 1, Pa.

**SOME OF THE ATLANTIC PETROLEUM CHEMICALS
ARE CURRENTLY IN SHORT SUPPLY**

IN THE EAST AND MIDWEST

THE ATLANTIC REFINING COMPANY

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NAUGATUCK CHEMICALS . . . Division of Dominion Rubber Co., Ltd.

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(Dept. D-5)

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Company _____

Address _____

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PETROLEUM
CHEMICALS**

**LOOK HOW
IT LATHERS!
NO WONDER IT SELLS!**



- Smooth powder, pleasantly scented
- No rough abrasive, but it sure cuts grease and grime
- Contains lanolin, so it leaves hands feeling soft
- Completely dissolves ... won't clog drains
- Free flowing ... won't pack in dispensers

**THE ONE POWDERED HAND SOAP
FOR BOTH SHOP AND OFFICE USE**

We don't believe there's ever been a powdered hand soap that lathers like PEPCO-415. And it's a good heavy lather that wins the grease-and-grime test on dirty shop hands. Our chemists worked months to give this powder real grease-cutting power without the use of irritating abrasives.

Many firms first bought PEPCO-415 for shop use. Soon the office force demanded it. Sales have been doubling up like that for dealers everywhere.

Show customers how PEPCO-415 works up mounds of lather *right now* in hot or cold water ... how well it cleans ... how soft it leaves the hands. You make ready sales ... nice profit.

Offer PEPCO-415 to get more of the powdered hand soap business.



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COMPANY**

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AT LOWER COST...

YOU CAN ACHIEVE important
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MM&R Liquid Soap Perfume Oils
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without filtration in solutions
as dilute as 15% ... and because
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levels despite their superior strength
and scent-appeal.

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of your unperfumed product and an indication of your price
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for your approval — without obligation.

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most widely-used
MM&R Perfume Oils
for Liquid Soaps

LILAS BLANC L. S.
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FOREST PINE BOUQUET
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(a popular, flowery bouquet)



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"packaged" to meet your needs*

CAUSTIC SODA

Liquid 50%, Standard and Rayon Grades
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CAUSTIC POTASH NATURAL SODA ASH

Liquid 45%, Flake and Solid*

Light and Dense

We are proud of the all-time alkali production records made by Westvaco plants in this year of unprecedented difficulties. We believe they will continue to make delivery as promised — both as to quality and quantity.

A continuing program of additions and improvements will provide additional Westvaco alkali tonnage into 1952. We seek new customers whom we can serve efficiently and economically by virtue of our barge, rail and tank-truck service from various Westvaco plants.

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SOAP



SHAVING CREAM



SHAMPOOS



FACIAL CREAMS

DREW FRACTIONATED DISTILLED COCONUT FATTY ACIDS

AB FRACTIONATED DISTILLED

AB is more than a distilled fatty acid, it is also fractionated to improve color, odor and composition. At least 90% of the low fractions (caproic, caprylic and capric) have been removed to minimize the "bite" inherent in coconut fatty acids, to improve odor, and to give greater soap value. AB has excellent, long-lasting color stability and a relatively low degree of unsaturation.

ABH FRACTIONATED DISTILLED

Whenever greater stability in finished products containing coconut fatty acids is required, ABH is ideal. It is hydrogenated to lower its percent of unsaturated acids, and fractionally distilled to remove the greater portion of caprylic and capric acids—the least desired in many shampoo and cosmetic preparations.

AVERAGE SPECIFICATIONS

PRODUCT	CAPRYLIC (Ca)	CAPRIC (Ca)	LAURIC (Ca)	MYRISTIC (Ca)	PALMITIC (Ca)	STEARIC (Ca)	OLEIC (Ca)	LINOLEIC (Ca)
AB	1.0%	3.0%	60.0%	18.0%	7.0%	1.0%	7.0%	3.0%
ABH	1.0%	3.0%	60.0%	18.0%	7.0%	8.0%	3.0%	

PRODUCT	FFA	TITRE°C	IODINE VALUE	ACID VALUE	SAP. VALUE	COLOR
AB	126-132	24-28	8-16	250.6-262.5	250.6-262.5	20.0/3.0
ABH	126-132	29	3.0 Max.	250.6-262.5	250.6-262.5	15.0/2.0

DISTILLED AND FRACTIONATED FATTY ACIDS

SOYA SAFFLOWER LINSEED OLEIC COTTONSEED STEARIC VRO
COCONUT LAURIC CAPRIC CAPRYLIC



WETTING AGENTS



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LIQUID SOAPS



DETERGENTS



Write for reference booklet, "DREW Fatty Acids"

TECHNICAL PRODUCTS DIVISION

E. F. DREW & CO., Inc.

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SOAP and SANITARY CHEMICALS

RENEX*

puts your detergent

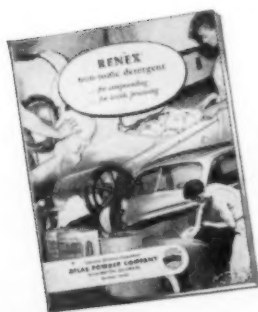
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RENEX steps up the efficiency of soap and other detergents

By combining **RENEX** non-ionic detergent with ordinary soaps and detergents, you can solve virtually any household, industrial, or military cleaning problem . . . produce cleaning compounds tailor-made to the requirements of your market.

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INDUSTRIAL
CHEMICALS
DEPARTMENT



ATLAS POWDER COMPANY, Wilmington 99, Del. • Offices in principal cities • Cable Address—Atpowco
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Aroma Can't Be Built in a Day...

IT HAS TAKEN YEARS to develop many captivating aromas to fit the increasing demand for perfumery. In order to assist manufacturers in shortening the development period of their new products, NAUGATUCK AROMATICS has been constantly experimenting and

developing such aromas for many years and is in a position to supply proven products to fit almost any problem. Why don't you consult with NAUGATUCK AROMATICS? You'll find a perfect combination of skill, resources and experience to help you handle your odor problem.

Write, or call us—soon!

NAUGAROMES—For various industrial and commercial uses.

SOAPOLS—For bar, paste and liquid soaps.

SHAMPAROMES—For liquid, cream and paste shampoos.

MODERN BASES—For fine perfumes, colognes, toilet waters, toilet preparations, etc.

CREAMODORS—For all types of creams and lotions.

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DIVISION OF UNITED STATES RUBBER COMPANY

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Sole Distributors for:

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MANUFACTURERS OF AROMATIC CHEMICALS—IMPORTERS OF ESSENTIAL OILS

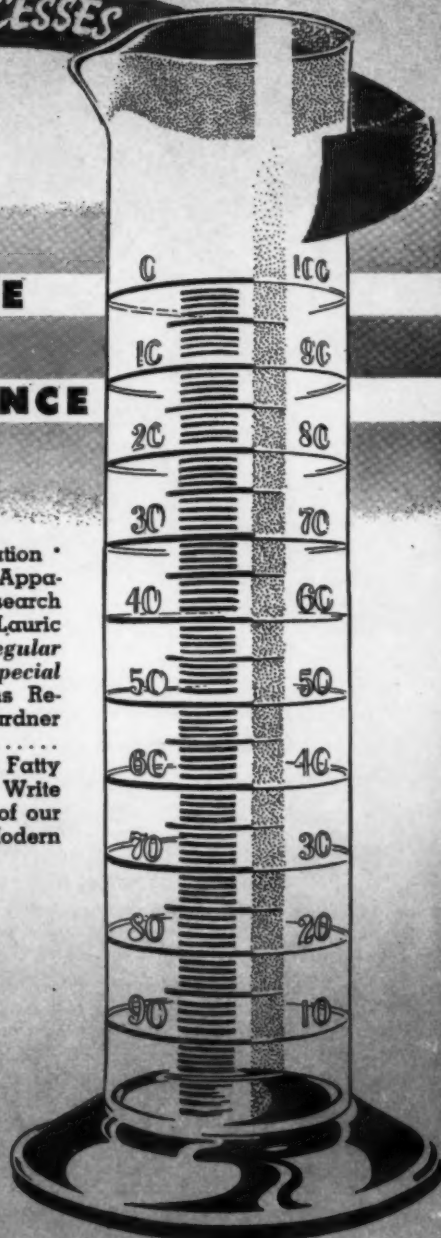
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BETTER PRODUCTS
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Fatty Acid of
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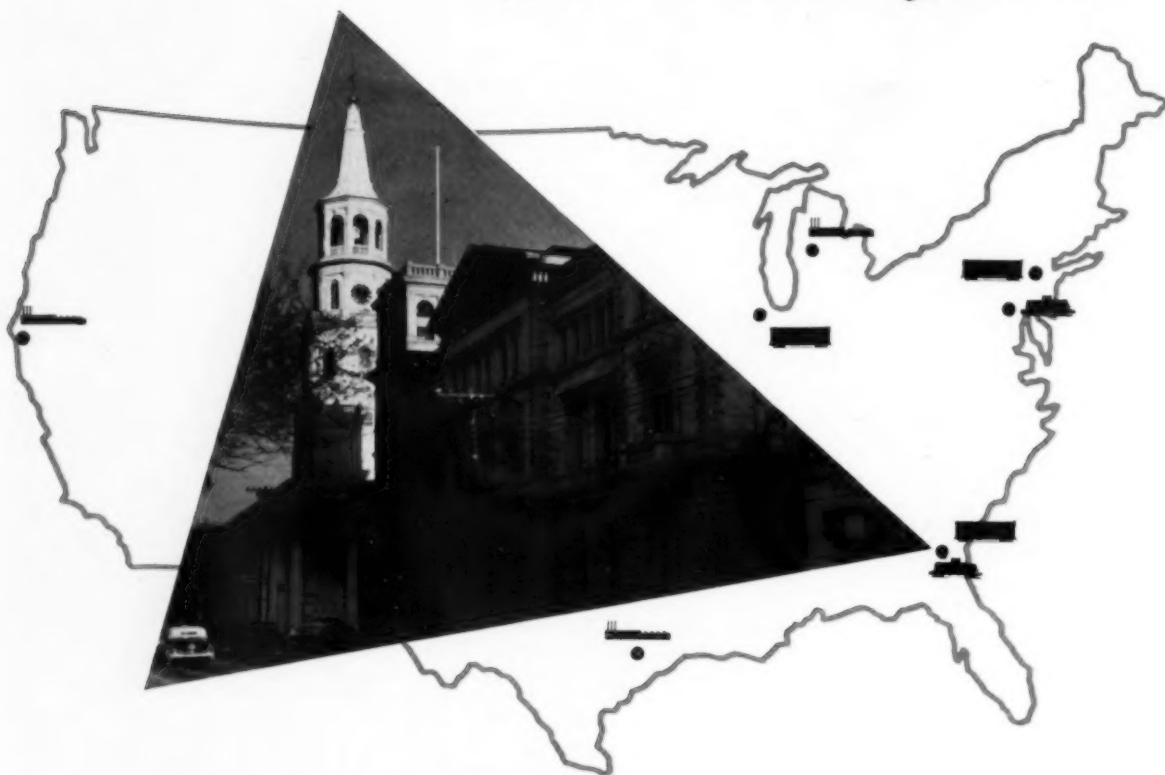
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Factory: Newark, N. J.

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Dow Chemical of Canada, Limited, Toronto 1, Canada



SOAP and SANITARY CHEMICALS

SOAP demand, as we all know, has not been anything to write home about over the past six months. Sharper competition has been the inevitable result right down the line. Attempts to stimulate sales in the household soap field have brought all sorts of devices into the picture of which the oft-used free-goods coupon plays its usual prominent part. As noted by an old-time soaper recently, the industry has brought forth more gadgets to sell soap during the past six or eight months than he had observed during the last twenty years. All designed to give their sales a shot in the arm, several have brought headaches to their sponsors, notably some of the coupon campaigns.

As might be expected in large-scale coupon distribution, by mail or otherwise, many of these free-goods tickets always find their way into wrong hands. For years, they have been prey for thieves and chisellers. Obviously, too close a watch to see that they are used by the individual housewife as intended is not practical. Many grocers give cash instead of the merchandise called for on the coupon, obviously illegal. Professional "collectors" buy in the coupons at discounts, reputedly a million dollar racket in New York alone. The refusal of a manufacturer recently to redeem coupons from one of these latter, and subsequent lawsuit, are significant.

No matter how we look at it, couponing by soapers or food people or anybody else is replete with headaches. As competition becomes more bitter, coupons are upped in value, thievery grows proportionately, as do the manufacturer's headaches. To police the potential racket features of any deal is just too tough. But, they tell us, couponing sells soap. For years, we have wondered how much,—particularly in the case of nationally-advertised and long-established brands. Does it really do a sales job of any duration, or does it just replace a flat sales curve with equivalent local sharp peaks and valleys? After watch-

ing a lot of sampling and couponing from the sidelines over the years, we are more sold than ever on good old newspaper, magazine and radio advertising for soaps and, in fact, any other household product.



REPRESENTATIONS to convert the processing tax on coconut oil into a straight import duty were made early this month by the National Institute of Oilseeds Products before the House Ways and Means Committee. Present processing taxes are three-cents per pound on Philippine coconut oil and five cents on oil of other origin. A switch to import duties of like amount was urged, plus the addition of a duty on copra, now duty free, of approximately two cents per pound.

For the soaper buying coconut oil as such from domestic suppliers, this re-arrangement of the same old blunderbuss coconut oil tax, would have only one slight advantage. He would avoid the red tape and record-keeping as the first domestic processor of the oil. Otherwise, the tax load would be exactly the same and his cost of coconut oil would still be disproportionate to his other fatty raw materials. For those soapers using coconut fatty acids, there would be no difference whatever.

In presenting arguments to the congressional committee, it was pointed out that the three-cent processing tax has outlived its usefulness in protecting domestic oils from coconut oil competition and that it is now an adverse factor in rebuilding the Philippine economy. Maybe we are dense, but we fail to see where an import duty of equal amount will make any difference. We agree that the processing tax lost one of its main functions when the Philippines became an independent nation. But just how would the same tax

under a different name, lift any of the burden from Philippine economy?

Coconut oil consumption in American soaps has been and is reduced by any excessive taxation, as bear witness to the effects of the processing tax. It is *any* excessive tax, not just a processing tax which puts a penalty on coconut oil use,— and in turn, as has been pointed out before here and elsewhere, an even greater penalty on the use of some American fats and oils, notably tallow. So as far as the average soaper is concerned, what difference does it make at what point the tax is paid. Whether paid to the fatty acid producer, to the importer, or when the oil is pumped to the soap kettle, the penalty is still three cents per pound.



SHAMPOOS may be the next "chemical products" to come under the investigative scrutiny of the so-called Delaney Committee, which is seeking authority to stay in business for another year. Having "investigated" the purity of the food supply industry, Mr. Delaney now proposes to "extend the inquiry to cover cosmetics". He cited as justification for the expenditure of taxpayers money for this purpose a case in which a shampoo product allegedly caused serious impairment of vision of the user.

The soap industry, therefore, seems headed once again for the whipping post. Although this is a new approach — attacking the safety of its products — others dealing with size, advertising, reduced amount of tallow consumed in soap making, etc., have also been used by publicity conscious politicians.

While there have been cases in which injury has resulted from the use of certain chemical products, these have been neither widespread nor fatal, usually. Manufacturers are interested in developing effective products that sell well and yet do not endanger life or limb of the consuming public. They have been subjected to a number of product liability suits, one of the most recent and best known of which was thrown out by a court of appeal as without justification. Many of these cases involve persons verging on the fringe of the racketeer, with attorneys who seem to specialize in these cases.

What is puzzling is why the chemical industry or its branches have been singled out for special

attention by our national legislators. The present case, that of investigating shampoos, exemplifies more clearly than any other how far off is the sense of proportion of our investigators. Whereas there are a few cases involving bodily harm resulting from a chemical product and still fewer fatalities, millions of persons have lost their lives or have been permanently injured through automobile accidents. Yet no voice in Washington is raised to find out why or what remedies have been tried to cut down the slaughter. Oh no, better put further federal controls on toiletries and cosmetics.



ONE OF the by-products of the revolution in food distribution brought about by the advent and growth to universality of the supermarket is the gradually shrinking importance of the merchant as a merchandiser. He is largely being supplanted by the maker of nationally advertised goods in the promotion of his wares.

Soaps, cleaners, floor waxes and polishes and other chemical specialties are excellent examples of the degree to which the manufacturer is performing functions formerly those of the merchant or merchandiser. Advertising has built up such a strong consumer demand for many of these household products that the main function performed by the store selling them is to see that they are stocked and displayed so customers can obtain them easily.

The self-service type store manager, as he is now designated, just shakes his head in bewilderment — if he is an old-timer — when asked why customers prefer this or that product. All he is concerned with is that the product "moves" and that he has sufficient stock on hand to meet demand. He knows little if anything of the composition of the product, except that it is advertised as containing this or that miracle ingredient and lets it go at that.

In this new situation, the manufacturer has a new set of problems to cope with, one of the most pressing of which is not being lost in the shuffle of standardization. It is our observation that crisp, fresh-looking packaging, identified quickly, plus colorful advertising with a high content of factual information can be the manufacturer's best friend today.

Industrial Soaps and Detergents

DIVERSITY is the most striking characteristic of the applications of soap and synthetic detergents. They have been used in fighting fires, embalming corpses, baking cakes, electroplating metals, killing bugs, washing streets, and—for publicity purposes at least—for sinking ducks. When these and many other uses are considered it is obvious that soaps and detergents are employed by a wide range of industries, crafts and trades. In fact, any use of matter in which the surface of an object—be it large or small—is an important consideration offers opportunity for employing soaps or synthetic detergents. But even this broad range of uses—for every material object has a surface—does not embrace all applications. Soaps and synthetic detergents may be employed because of their colloidal or chemical properties. Thus for example, aluminum soaps are used to thicken gasoline used in fire bombs. The chemical properties of cobalt, manganese and lead soaps form the basis of their well known use as driers in paints and varnishes.

This extremely wide range of uses of soaps and synthetic detergents is perhaps the basic reason why more is known about *how* to use them than is understood concerning the physical-chemistry of processes involved in accomplishing the results achieved. In

this highly diverse field the art is still ahead of the science.

This does not mean of course that an understanding of the underlying physical-chemical factors is not a matter of importance. Any lingering doubt in this respect is quickly dispelled when we recall the essential role played by theoretical understanding—limited though it was—in the development of synthetic detergents. Once it was clearly understood that a synthetic detergent—or more generally a surface active agent—can be expected to result from hooking together chemically a hydrophilic and a hydrophobic group the door was opened for the organic chemists to exert their skill in synthesizing an astonishing number of different compounds. In fact, during the thirties, something that resembled a chain reaction resulted with the invention of one new type of synthetic detergent seeming to stimulate the invention of two others. Products having almost any combination of chemical structural features have already been synthesized or could be at the present time. From the point of view of chemical synthesis, the preparation of synthetic detergents is not particularly difficult. The synthetic methods

employed are in general rather less complex than those used for making dyestuffs.

It is instructive to consider in a little more detail certain similarities and differences of the approach of an organic chemist to the problem of chemically synthesizing a new detergent and the approach of the application research man to developing a new use for such a product. In the first place, the organic chemist has no difficulty in defining his problem. His task is to construct molecules in which the atoms are linked together into a well-defined pattern. Thanks to our present knowledge of the architecture of molecules, the specification of a desired structure will immediately suggest to the skilled organic chemist at least one, and often several possibilities of building up the desired molecule. As a consequence of this, an organic chemist can within wide limits, synthesize on demand a detergent having a prespecified molecular structure. Usually a relatively small amount of laboratory experimentation will yield the desired product.

At first sight, it would seem reasonable to regard organic synthesis as involving problems completely different from those encountered in developing a new use for soaps and detergents. The organic chemist builds molecules but the application expert develops new methods for washing, dispersing, emulsifying, etc. It must be remembered, however, that molecular processes are involved in the great majority of detergent applications. Perhaps the simplest of these processes is the formation of a film of oriented molecules at an interface as in making emulsions. In jellied gasoline, the desired thickening is achieved by building up highly solvated micelles from the dispersed aluminum soaps. In these two applications, at least, we know quite a lot about how the detergent or soap molecules build up the desired structure—the oriented surface film in the emulsions and the micelles in the thickened gasoline. But

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* Based on a paper presented at the 24th annual meeting, Assn. of American Soap & Glycerine Producers, Inc., New York.



Champion Paper & Fibre Co. photo

Paper makers employ detergents to increase absorbency.

even in these relatively well understood cases, our knowledge is not as precise and detailed as in the realm of organic synthesis. In some of the most important applications of soaps and detergents our knowledge of how they function to form molecular complexes is still very rudimentary. This is true for the very old, but very important process of washing. The key step in washing appears to be a form of colloidal interaction whose precise nature is now being intensively investigated. Once we thoroughly understand this key step and other processes associated with it, the development of washing agents having any desired combination of properties will be greatly facilitated.

Detergent Development

FOR the present at least, the development of a detergent product with specified properties for a given application is much less a matter of engineering design than of laboratory experimentation. It is well to emphasize at this point, the fact that the term "product" when applied to soaps and synthetic detergents does not in general refer to a pure chemical substance. With almost no exception detergent products are mixtures often of substances of highly dissimilar na-

ture. A single detergent may well contain for example mixed alkylaryl-sulfonates as the so-called "active material" and also as builders polyphosphate and a soluble cellulose derivative. Each of these ingredients may be necessary to achieve what may be—from a practical point of view—at least—a single effect. Prolonged experimentation of the trial-and-error or sometimes called Edisonian research-type is often unavoidable in order to develop a detergent product having certain desired properties in order to open up a new realm of application.

Laboratory experimentation is expensive and consequently there is an understandable desire on the part of those paying the bills to have the new product developed with a minimum of laboratory work. This means of course, that problem steering of the experimental program is a matter of utmost importance. Experimental work based on fundamental physical-chemical considerations can usually provide a good start toward developing the desired product. Such an approach, however, often reaches a limit beyond which trial-and-error experimentation becomes necessary. In working through this difficult stage of the development,

it is important to keep in mind the fact that success in Edisonian research not only requires diligent experimentation and keen observation in the laboratory, but also the ability to pick up and use apparently unrelated bits of information to be found in the library. An example will make this highly important point clearer.

At one time I participated in a research program aimed at developing a new type of dry cleaning soap. We hoped to overcome certain disadvantages said to characterize acidic oleate soaps when used as dry cleaning detergents. Before starting our development we knew that dispersed water is a very desirable aid in dry cleaning to remove water-soluble stains and thus reduce the need for costly hand-spotting. It so happens, however, that the amount of water which can be usefully employed in dispersed form during dry cleaning depends on the nature of the goods. With heavier fabrics more water is desirable, with finer fabrics, less. Hence, for the dry cleaners convenience, it was desirable to be able to add considerable amounts of water to the detergent composition prior to its incorporation in the dry cleaning bath.

It goes without saying, of course, that the new detergent had to be effective in removing soil.

General considerations of both a theoretical and practical nature suggested that various sulfonated type detergents might be effective in dry cleaning baths. Experiment revealed that certain higher alkylarylnilfonates were particularly effective in removing soil and that a certain amount of water was fairly readily dispersed in the bath, by such detergents. Difficulty was encountered in achieving the desired possibility of incorporating water into the detergent composition before its addition to the dry cleaning solvent. It was not too difficult—by selecting the proper blending agents—to obtain an oil-in-water emulsion by incorporating water into the detergent composition. Such an emulsion however, dispersed so poorly in a dry cleaning bath as to be virtually useless. What was lacking was the ability to incorporate water into the detergent composition to form a water-in-oil emulsion. Many things were tried in attempting to achieve the desired dispersability. A number of variations in the preparation of the alkylarylnilfonate failed to give the desired results. A number of blending agents were investigated without achieving success. Finally my attention was drawn to the fact that the presence of salt in certain naturally occurring petroleum emulsions appears to increase their stability. A very brief period of experimentation revealed that any one of several salts when added in properly adjusted amount, was effective in producing the desired result. Thus the problem was solved by taking note of an observation made and recorded by a worker in an apparently quite unrelated field. An observation made in the library provided the sign post to guide laboratory experimentation.

In the case just described, the solution to the difficulty was found by supplying another ingredient to the product. Sometimes, however, trouble is caused by the presence of an ingredient having an undesired effect. An example of this type has been described recently. During the war, trouble was encountered in one of the

synthetic rubber plants using soap bought on specification as an emulsifier in the polymerization step. A careful check on the process revealed no obvious deviation from standard practice which previously had already proved successful. The properties of the polymerized product indicated that something was interfering with the polymerization process. Chemical detective work revealed that diene unsaturated fatty acids present in the soap were responsible—these acids it was concluded had been acting to interrupt the chain-reaction essential to satisfactory polymerization. The trouble cleared up on rewriting the soap specifications so as to exclude the troublesome unsaturated acids.

Problems encountered in developing new and expanded uses for soaps and synthetic detergents are not simple. Solution of such problems requires not only expert knowledge of the soaps and detergents but also an understanding of their interaction with a wide variety of other substances. Planning and directing application research requires skill of the highest order. Often the investment of time and ingenuity in the library will provide clues and hints effective in saving much time and effort in the laboratory.

In closing I would like to refer again to the brief story just told concerning emulsion polymerization. It seems to me that there is danger of our overlooking an important point. We have all been highly impressed—and rightly so—with the progress made in the last twenty years in developing synthetic detergents. Thanks to their unusual properties it has proved possible to use synthetic detergents to do many things which soaps cannot do. This does not mean, however, that soaps are not highly effective, versatile products. In tackling a new application for detergents—or in considering the improvement of known processes—the possibilities inherent in soaps should not be neglected and overlooked. Our national passion for the new and novel may well have led us to devote less attention to soaps than their properties actually warrant. Even those properties

of soaps that are regarded as undesirable are not always disadvantageous. Precipitation by hard water is generally considered a disadvantage and indeed it is for most uses. Yet there is no denying that much precipitation has simplified the operation of sewage disposal works. In our enthusiasm for the new synthetics, don't sell soaps short.

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Hexachlorophene is determined in soap by measuring the color produced by reaction with ferric chloride in alcohol solution with controlled conditions of time and temperature. The precision is within \pm five per cent of the hexachlorophene content at the $\frac{1}{2}$ per cent level or above. As a criterion, any soap that will give a finely dispersed barium soap and that does not form a precipitate with ferric chloride under the conditions of the method gives good results. This includes all milled bar soaps. The effect of phenolic perfume ingredients on the result is negligible. Five per cent abietic acid in the fatty acid composition has no effect on the result. The method is slightly modified for use with liquid potassium soaps. H. L. Larson, *J. Am. Oil Chemists Society* 28, No. 7, 301-304 (1951).

Rosin acid soap, an ingredient of GR-S synthetic rubber, is a thick, sticky liquid.

United States Rubber Company Photo





New Soap Is Spur

WHAT improved package design can do for the sale of staple items like toilet soap is currently being demonstrated on the Pacific Coast. There the White King (Los Angeles Soap Co.) soap people of Los Angeles have just released sales data on the debut of a new wrapper for their "Sierra Pine" toilet soap. The wrapper was designed by Walter Landor & Associates, indus-

NEW STYLING of brand name was planned by designer Landor to enrich the appearance of the soap itself after unwrapping (above) and while in use—as well as help increase sales appearing on wrapper.

STACKED OR FLAT, the new "Sierra Pine" wrapper (right) gets across its distinctive new brand name treatment as styled by Walter Landor & Associates. Wood grain background and tree symbols were devised to project visually and more effectively the "fragrance of the pines" theme of the soap.

SIGNIFICANT SALES INCREASES have been reported for "Sierra Pine" toilet soap after adoption of new wrapper (upper left, facing page). Major changes include restyling the brand name into an attention-getting "memory" device; altering the symbol into a more realistic High Sierra pine rather than the old Christmas tree silhouette; and adding a rich wood grain background to project visually the "fragrance of the pines" theme of the soap. All of this was gained without increasing printing costs of the two color wrapper.

SHIPPING CASES (upper right, facing page) prove power of basic design, which still comes through effectively even with relatively crude printing processes used for this type of container. Advertising and point-of-sale uses also played an important part in decisions made by designer Landor and White King officials in the development of "Sierra Pine's" "new look."

OLD AND NEW "Sierra Pine" wrappers, left to right (lower left, facing page), dramatically show the changed appearance that has come to this time-honored White King soap product. Continued recognition by old customers was assured by designer Walter Landor's retention of the familiar pine tree symbolism. Also retained was color scheme—two hues of green.

DESIGNED FOR DISPLAY — Better display and attention-getting characteristics were a prime goal for the designer in restyling of the "Sierra Pine" toilet soap wrapper. How well they succeeded is shown in photo at lower right, facing page. Even in the jumble of a bin display, the soap's new and more powerful identity comes through from every angle.



Wrapper to Sales

trial designers of San Francisco.

According to E. M. Finehout, executive vice-president, "the new wrapper has helped win increased sales in all of 'Sierra Pine's' regular markets and also is opening up new outlets."

Apparently the soap's new friends have been won without losing any of its old ones—a prime requirement set up in early conferences between Mr. Finehout, his assistant

advertising manager, Irving Lessin, and the designer. Mr. Landor met this need by carrying over some of the old wrapper's well established design elements; notably, he retained and intensified its basic color scheme and strengthened its pine tree symbolism.

One important feature of the new wrapper is the restyling of the brand name. New emphasis and distinction have been given the first letter of the word "Pine".

Also significant are the "all-around" display features given the new wrap. All-over continuation of its green forest pattern and repetition of its new white-lettered brand styling are said to assure recognition of the soap no matter how it is displayed.

Direction of the design has been changed, too. Where the old

wrap was arranged vertically, the new one has been given a horizontal pattern that is better adapted to modern retail shelf display procedures. The horizontal pattern also gives the new wrap an illusion of larger size.

Styled for Dual Appeal

STYLING of the new wrapper was planned to appeal to both feminine and masculine shoppers and echo the quality factor so vital to toilet soap merchandising. The feeling and contours of hill and forest are now projected by tree symbols on a wood grain background. These supply a more effective, visual suggestion of the "fragrance of the pines" theme which formerly had to be conveyed in words on the face of the old wrapper.

Kept in mind by the designer
(Turn to Page 165)



Shaving Preparations

By Milton A. Lesser

Part I—Lather Type Products

Soap is an important basic ingredient of lather type shave products, the market for which is a large one, estimated at some 53 million regular shavers. Manufacture of shaving creams may be carried out by the full-boiled or half-boiled soapmaking process.

EVEN though they look upon shaving as something of a chore, most men are rather particular about the shaving preparations they use. While some men have definite preferences and stick to one brand of shaving cream or shaving soap, most of them are willing to try another product if it offers greater speed, comfort or other advantage.

Proof that the industry is aware of this fact and constantly working to improve its products is provided in the growing market for shaving creams and soaps. The market is a big one and it is estimated that over 53,000,000 men are now regular shavers. Whether this is due to the effect of training in the armed services, a high rate of employment at high wages, a growing awareness of personal appearance or to other factors, it is quite apparent that more American men are shaving much more frequently than they did a decade ago. (1)

Preferences in shaving preparations have undergone definite changes.

Shaving soaps in stick, mug or powder form have given way to the cream type products. These, in turn, are meeting a certain amount of competition from electric shavers. This is indicated clearly in analyses of consumer preferences such as are given in the survey made by *The Indianapolis Star and News*. In the 1951 study, (2) it was found that 32.5 per cent of those questioned used brushless shaving cream and 31.1 per cent preferred the lathering type shaving cream applied with a brush, while 32.9 per cent used electric razors. The figure for electric razor use seems considerably above the average for the entire U.S.

With the great majority of men—those who use safety razors—brushless shaving creams and the regular or lathering variety of shaving creams are vying with each other for first place. Recent studies indicate that the lead held a few years ago by the brushless products is being challenged by the lathering shaving creams. However, as noted by Reilly, (3) there are sectional

variations as to preferences. Thus, according to a recently published consolidated consumer survey, (4) 41.9 per cent of the men in Seattle prefer a regular shaving cream and only 21.8 per cent use a brushless product. In Salt Lake City, the brushless types rate highest; 29.3 per cent of the men use such products, as compared with 25.6 per cent using the lathering kind of shaving cream. In Washington, D.C., however, the picture again reverses itself. Here 40.2 per cent use regular shaving cream, while 34.1 per cent show a preference for the brushless preparations.

Standards for the various types of shaving creams and soaps have been set up and are available in Federal Specification FFF-C-641. Here the products are divided into two main types with several classes in each, type I, covering soaps, including cakes, sticks and powders, while type II covers creams of the lather and brushless classes. For the purpose of this discussion, however, the shaving requisites are divided into two main groups based upon whether or not a lather is produced and a brush is required. Hence the first group will include lathering creams, shaving bowls and cakes, and shaving sticks, powders and liquids. The second group includes not only the brushless creams, but the recently introduced aerosol or pressure propelled types of products as well.

Soap Basic Ingredient

ALTHOUGH supplied in various forms, all members of the first group depend on soaps, their basic ingredient. Soap is important because of its ability to emulsify the waterproof sebum covering the individual hairs. This action enhances the wetting of the hairshaft. From the viewpoint of effective performance, the desirable properties of shaving soaps are: (a) voluminous lathering qualities, (b) resistance to rapid drying on the skin, (c) freedom from skin irritation, and (d) rapid softening of the hair by the water in the lather.

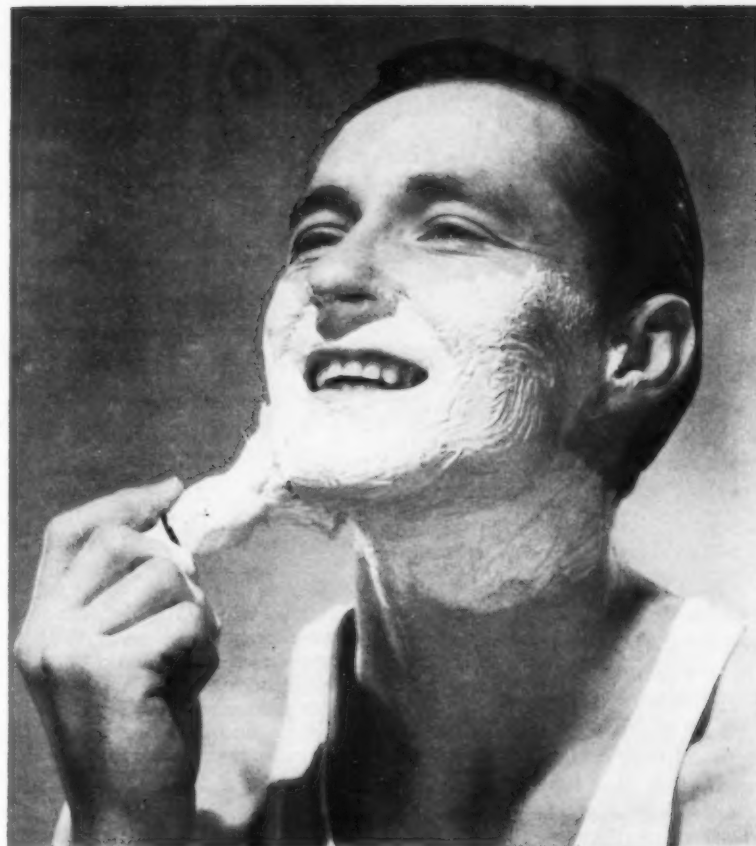
As noted by Hollander and Casselman, (5) in their comprehensive report on the factors involved in satisfactory shaving, the first three prop-

erties are mainly dependent on the chemical composition of the soap. This, in turn, is dependent on the alkali used and the type of fatty oil or fatty acid combined with it. With regard to the fourth characteristic, the composition of the soap has little bearing on its effectiveness as a beard-softening agent so long as it has good emulsifying properties and meets the requisite of not irritating the skin.

The regular or lather shaving creams are, by far, the most important members of the first group. In addition to meeting the basic requisites of all shaving soaps, these creams must possess additional virtues in order to maintain their position and acceptability. According to Thomssen, (6) these properties include: correct consistency so as to extrude easily from the tube and without loss of shape; the ability to work up quickly into an abundant close lather that does not dry on the face; economy in use, only a little being required per shave; clean, rapid rinsing; stable shelf-life; and proper perfuming and packaging.

Standards with respect to both performance and composition are indicated in the federal specification. Here a lather shaving cream is defined as a soft, uniform cream or paste free from alkali. It must distribute well into the bristles of a shaving brush and yield a heavy creamy lather that will remain moist on the face until the shaving is completed. The minimum anhydrous soap content (calculated as potash soap) is 40 per cent. The maximum fatty acid content (calculated as stearic acid) is 6.5 per cent and the moisture content must not exceed 50 per cent.

A few years ago it could be said that the average shaving cream would show a 40 per cent actual soap content, together with about 10 per cent of glycerine, and 50 per cent of water. This description could, of course, fit some products now on the market, but it fails to give a full picture of the varied raw materials entering shaving cream formulations. Coconut oil and stearic acid are the chief fatty ingredients, but tallow, palm oil and olive oil are sometimes used. Saponification is generally achieved



Ewing Galloway photo

through the use of combinations of caustic potash and caustic soda. The most desirable proportion of alkalis is said (7) to be about one part of caustic soda to five parts of caustic potash but there is considerable variation in this respect. Sometimes, as when free fatty acids are used or when special effects are desired, other saponifying agents, such as triethanolamine or the carbonates, are employed.

Stability and consistency are favorably influenced by the inclusion of glycerine. As remarked by Ruemele, (8) glycerine helps to improve both the smoothness and softness of a shaving cream. Although some opinion holds that glycerine tends to somewhat decrease the lathering power, this European authority points to the fact that most products contain 10 to 12 per cent of this humectant. In his opinion its advantages outweigh any disadvantage. Of course, as noted by DeNavarre, (9) other polyols may be used in the formulations. He also mentions that mucilages, notably sodium

alginate mucilage, have been used to overcome consistency changes.

Various other materials are included in lathering cream formulations to improve the properties or obtain a better shave. Rather interesting in this connection is the following British formula (10) for a lathering shaving cream in which is designated the specific function of each ingredient:

	parts
Stearin (to give body to the cream)	26
Coconut oil (for its lathering properties)	7
Palm oil, bleached (to counteract by its mildness any sharpness produced by the coconut oil)	4
Olive oil (for its soothing action)	4
Rosin WW (to prevent rancidity)	2
Glycerine (to keep the cream mobile and the lather in a moist state when applied)	9
Potash, 60°Tw.	29
Soda, 60°Tw. (to lift the lather)	1
Water	18

Considerable care and skill are required in the manufacture of these shaving creams if undesired defects are to be avoided. According to

Thomssen and McCutcheon,(7) manufacture of these soap products may be carried out by either the full-boiled or half-boiled process. In their experience better results are obtained, especially for quantity production, by the full-boiled process, although very acceptable creams are made by the half-boiled method. Essentially the same mixing equipment is required for making shaving cream by either procedure.

More recently, some producers have simplified shaving cream manufacture through the use of fatty acids rather than fats or oils. This departure, says Hilfer,(11) has resulted from improved distillation techniques which yield highly purified fatty acids in commercial quantities. By their use the irritating components of an oil are eliminated while the desirable characteristics are retained. Better control and faster manufacture are also possible.

Many formulas for making lathering shaving creams are available. Janowitz,(12) for example, presents the following "good" simple type of formula as one which has met the test of actual practical use:

	parts
Caustic potash lye (42°Be.)	7.5
Coconut oil	3.0
Glycerine	3.0
Stearic acid	14.0
Water	16.0

The coconut oil cold-processed soap is made with part of the lye. When the soap has been formed, it is diluted with the rest of the lye and neutralized with the stearic acid. The water is then brought up to the indicated figure and the glycerine is also incorporated with constant stirring. A cream made by this method contains about 5 per cent of unsaponified stearic acid, thus giving a creamier and closer lather. The cream should be aged for at least two weeks before filling, after which it should yield a good, smooth product.

A common procedure, as illustrated in the following formula,(9) is to use a mixture of alkalis as saponifying agents:

	parts
Stearic acid	36
Coconut oil	9
Sodium hydroxide (100%)	1

Potassium hydroxide	8
Glycerine	5
Water, to make	100

Mix the coconut oil and glycerine and bring to 75 to 80°C. Dissolve the alkalis in 20 parts of the water and add to the previous mixture in a thin stream while stirring slowly. When saponification is complete; a matter of 10 to 15 minutes, add the melted stearic acid in a thin stream. Cool, check for completeness of saponification and adjust the excess fatty acids

PART II—BRUSHLESS PRODUCTS

Part II of "Shaving Preparations" will cover the brushless type products. A section of the article will be devoted to the new aerosol type shave creams, which are dispensed under pressure in the form of lather from metal containers. Formulations for brushless type shaving products will be given, and new developments, will be covered.

by adding up to 1.5 per cent of boric oleic, myristic or other acid until the proper free fatty acid figure (e.g., 3 to 5 per cent) is obtained. The product is set aside in a pony mixer for a few minutes each day, the perfume being incorporated on the first day. It should be noted, however, that some workers do not mix the cream again, once the perfume is added. Experienced producers consider it important to allow a two-week ageing period during which the product reaches equilibrium.

Sometimes triethanolamine is used in conjunction with or as a partial replacement for other saponifying agents. Its employment is indicated in the following composition:(13)

	per cent
Stearic acid, triple pressed	33.60
Coconut oil	6.40
Triethanolamine	1.00
Glycerine	8.00
Potassium hydroxide	7.11
Sodium hydroxide	0.35
Water	43.04
Perfume	0.50

Melt the stearic acid and the coconut oil in a corrosion-proof kettle. Put the water, triethanolamine, potassium and sodium hydroxides and glycerine into another vessel and heat

until dissolved. Run the melted fats into the hot alkali solution with stirring. Maintain the heat (steam) for half an hour while mixing. Continue stirring at reduced speed until the soap is smooth and homogeneous. When cool, add the perfume with thorough mixing. Finally dump the batch into suitable tanks and allow to age for three days.

As already indicated, fatty acids may replace the oils with certain advantages in production and control. The literature(14) of one leading manufacturer of fatty acids offers a typical formula for making a lathering shaving cream with such materials:

	parts
Coconut fatty acid, triple distilled	8.3
Stearic acid	31.0
Glycerine	19.0
Potassium hydroxide, U.S.P.	7.0
Sodium hydroxide, U.S.P.	1.0
Borax	0.7
Water	33.0

Various substances are added to lathering shaving soaps to improve stability, reduce irritation or to provide other desirable effects. Mucilages of gums or similar materials, for example, may be included to help prevent consistency changes with variations in temperature. Sodium alginate is said (9) to be especially useful and its inclusion is shown in the procedure given below:(15)

	parts
Stearic acid	336
Coconut oil	64
Glycerine	40
Sodium alginate, 2% mucilage	30
Boric acid	14
Potassium hydroxide, 4% solution	184
Sodium hydroxide, 36% solution	28
Water	299
Perfume	as desired

Melt half the stearic acid with all the coconut oil and heat to 75°C. Separately mix the two alkaline solutions, bring to the same temperature and add slowly to the previously prepared mixture. Heat and stir until saponification is complete. Slowly add the rest of the stearic acid warmed to 70°C. and continue stirring. Dissolve the boric acid in the water, heat to 65°C. and add slowly until the cream is smooth and uniform. Mix the glycerine with the alginate mucilage and

work into the cream. Add the perfume. Allow to set for at least two weeks and then work until soft before packing into tubes.

Cetyl Alcohol

CETYL alcohol is a frequent component of shaving creams. As remarked by Goodman(16) some years ago, this ingredient gives good emulsification and has the ability to impart a velvety feel to the skin. He includes up to four per cent of cetyl alcohol in several of his formulas. It is present in the more modern cream developed by Augustin(17) to yield a smooth product which gives a strong, stable lather and a pleasant feeling to the skin. This consists of:

	parts
Tallow	1000
Castor oil	100
Olive oil foots	100
Lecithin, vegetable	50
Caustic potash, 50°Be.	430
Caustic soda, 40°Be.	20
Zinc stearate	20
Glyceryl monostearate	20
Cetyl alcohol	10
Water.....	200, eventually 300 parts

The tallow, olive oil and lecithin are melted slowly and held at about 60°C. The mixed alkalis, warmed to the same temperature, are stirred in, and the whole is kept warm for two hours. The castor oil is then stirred in and the mixture allowed to stand for another half hour. Hot water is stirred in and the composition is kept warm for half an hour. Separately, a cream is made with the glyceryl monostearate and cetyl alcohol in water; the zinc stearate is stirred into the cream, which is then added to the cooled soap mass, followed by the addition of a suitable perfume.

In commenting on the inclusion of zinc stearate, this European authority states that it tends to give an antiseptic action to the cream. However, too much of this ingredient will change the quality of the lather. In connection with this action, it should be noted that antibacterial hexachlorophene is present in at least one well-known brand of shaving cream. (18) It is said(19) that such inclusion reduces the possibilities of infection from hair follicles and abrasions. Interesting is the fact that shaving



Typical lather type shaving products: shaving powder (lower left); shaving stick; lather shave cream (rear); shave bowl and aerosol pressure propelled shave cream, discussed in next installment.

creams were the first major, nationally advertised products to contain hexachlorophene. The advantage of using antiseptics in shaving preparations has been considered in some detail by Bryan.(20)

After a consideration of the factors responsible for skin irritation, Doubleday(21) offers the following formula for a cream that will give an easy and emollient shave:

	parts
Coconut oil	10.0
Castor oil	2.0
Myristic acid	5.0
Stearic acid	25.0
Potassium hydroxide (89/90) ..	9.5
Borax	0.5
Diglycol stearate	2.0
Stearyl alcohol	1.0
Liquid petrolatum	1.5
Sorbitol	5.0
Water	5.0

The potash and borax are dissolved in the water in a stainless steel vessel. The oils and fatty acids are added to this solution without being melted, since the heat of reaction will start the saponification. The vessel is then heated on a water bath and the mixture is stirred occasionally until saponification is completed. The remaining ingredients, except the sorbitol, are then added and the batch stirred slowly. The covered product is left on the bath for an hour, after which the sorbitol is added. After age-

ing, a shaving cream of good stability and freedom from irritation is obtained.

Menthol as Anti-Irritant

DOUBLEDAY mentions that the irritation caused by some shaving creams can be masked temporarily by using menthol in sufficient quantity to act as a local anaesthetic. Hilfer(11) also comments on the cooling, irritation-masking effect imparted by this agent. In discussing European views, Henk(22) observes that menthol is recommended because of its cooling and freshening effect on the skin. Menthol possesses a certain amount of astringent and anaesthetic action thus making shaving less objectionable. However, too much menthol is itself capable of causing irritation, and an excess must be avoided. It is generally recognized that 0.25 per cent or less is sufficient to impart the desired effects.

The effect of hard water on the lathering properties of soaps has received some consideration. Henk mentions that some producers add stabilizing agents to shaving soaps to prevent the deposition of calcium and magnesium soaps, which would be particularly objectionable on the face. Another approach is offered in Guest's(23) pat-

(Turn to Page 57)

WHAT'S

A new Christmas package of the "Little Lady" line of toiletries for children introduced recently by Helene Pessl, Inc., New York, consists of two cakes of soap and a bottle of toilet water and special Xmas card in gift type box.



"House of Stuart" (C. H. Stuart & Co., Newark, N. Y.) shampoo and toiletries and cosmetics are now put up in new glass packages that feature uniformity in bottle, label and closure design to establish strong family relationship between products. New bottles, top row, are supplied by Owens-Illinois Glass Co., Toledo. Plastic closures are by Armstrong Cork Co., Lancaster, Pa., and offset blue labels with crest design and wraps by E. F. Newell, produced by Addison Lithographic Corp. of Rochester, N. Y. Individual folding cartons are from Rochester Folding Box Corp.



"Rough and Ready" Mouse Mix containing warfarin, first introduced last year for home use by J. T. Eaton & Co., Cleveland, is now available in match-book type container with directions illustrated on inside cover. The user simply sprinkles, shakes and serves. Designed to retail for 29c.



S NEW?

New giant size package for "No-Rinse Surf" contains two pounds and seven ounces of the synthetic detergent made by Lever Brothers Co., New York. Similar in appearance to the 19-ounce size, designed by Raymond Loewy Associates, it is being backed by a series of colorful display and merchandising materials.

New combination beauty kit (upper right) for fall cleaning is Boyle-Midway's "Old English" scratch cover polish and "Wood-brite" silicone furniture polish. Combination is 89 cents.

"Chat" liquid synthetic detergent for automatic dishwashers has switched from a metal to a glass container. The new amber glass quart bottle (made by Owens-Illinois Glass Co., Toledo), contains the same amount of the detergent as the familiar blue metal can. Twelve quart bottles are packaged to the case. Price is unchanged. Antara Products, division of General Dye-stuff Corp., New York, makes "Chat".

Newly redesigned label for "Sta-Flo" liquid starch of A. E. Staley Mfg. Co., Decatur, Ill., is shown at right in photograph. Changed areas of label color and tone have improved the selling appearance of the package as contrasted with old label at left. Features of the new label include white lettering of product identification on an intensified blue background with blue lettering on white at the bottom of label offering a color contrast with the product. This treatment simply reverses the colors formerly used. "Duraglas" bottle and red and white metal closures with space for price marking both are made by Owens-Illinois.

A third fragrance (Lilac scent) has been added to the line of "Wizard Spray Deodorizers" of Boyle-Midway, Inc., New York. The newest squeeze bottle deodorizer becomes a companion product to Wizard's pine scent and spring bouquet. Each sells for 39 cents. The color of the packages closely resemble that associated with the scent of the same name.

Manufacture and marketing of "Craftsmen Hand Cream", a barrier type cream, applied prior to handling of certain chemical materials for easy removal by rinsing skin with water, was announced recently by Ottawa Engineering and Sales Co., Marne, Mich. Packed in eight-ounce jars, it also comes in one and five-gallon cans and 55-gallon drums.

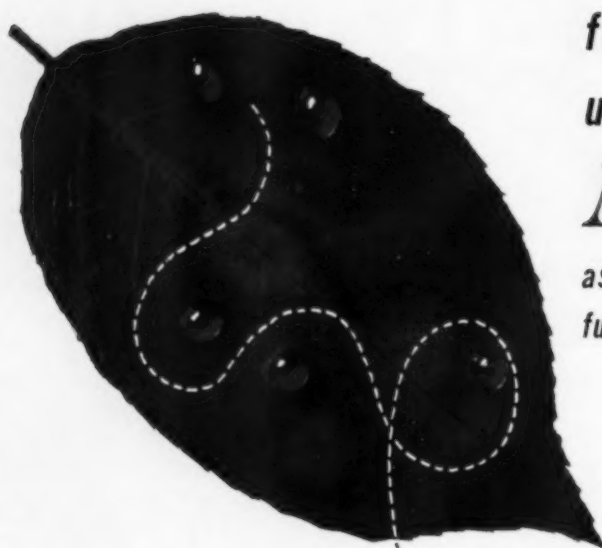


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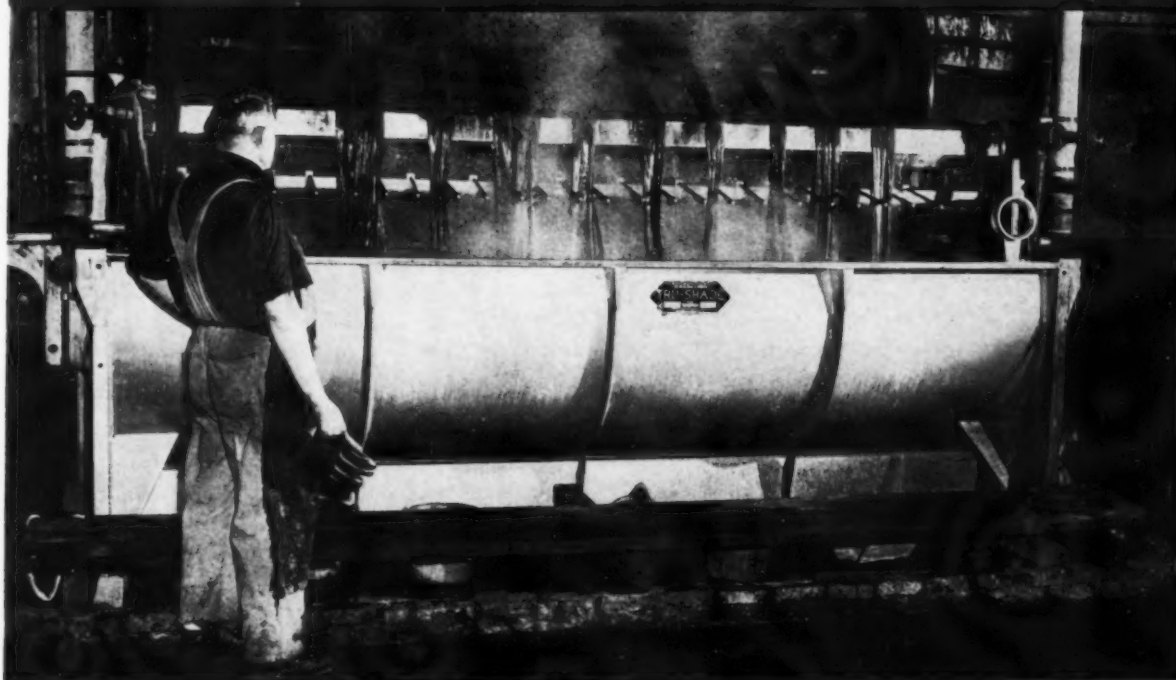
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Detergents for Textiles



A textile dyeing kettle in operation. Synthetic detergents are used widely in this operation as levelling agents. Aspinook Corp. Photo.

WHAT is the effect of builders on detergents? By builders we mean inorganic salts which when added to detergents enhance the detergents' activity in some manner. It has long been known that many alkaline salts such as borates, phosphates, silicate and carbonates help the detergent action of soaps. More recently it has been found that these builders when used with many of the synthetic detergents also greatly enhance the effect of these detergents. With certain detergents, even ordinary neutral salts, such as sodium sulfate, and sodium chloride have also been found to be of value. The use of builders has become of great importance with many of the newer synthetic detergents, not only for household laundering, but for many of the commercial detergency operations encountered in the textile plant. In many

*Presented recently before the American Assn. of Textile Colorists and Chemists, Northern New England Section.

By Sidney M. Edelstein*

Dexter Chemical Corp.

Part II

cases a combination of a synthetic detergent and a builder may be more effective for a particular operation than the synthetic detergent alone. The fact is that these builders which many people formerly considered as diluents, are in many cases more important than a higher active ingredient content. This illustrates again that a detergent, whether a pure chemical compound or a combination of an organic detergent and inorganic builders, should be examined for its ability to do the job, and not for its actual chemical content alone.

Sequestering Agents

ARE sequestering agents useful with synthetic detergents or only with soaps? The terms builders and sequestering agents have often been confused. Perhaps the reason for this

confusion is the fact that certain builders, which have been used with soaps as well as with synthetic detergents, also have sequestering powers. By sequestering powers we mean the ability to form complex ions with metallic ions and thus prevent these metallic ions from taking part in their normal chemical reactions. Thus, calcium or magnesium properly sequestered will not form insoluble calcium or magnesium soaps.

The need for a sequestering agent with soap is obvious. Soap has always had the disadvantage of forming insoluble metallic soaps. In textile processing and in laundering these insoluble soaps not only use up the soap, but in addition, cause sticky, harmful deposits which can cause trouble in dyeing and finishing. Upon the introduction of the synthetic detergents, however, it was assumed that sequestering agents would be of no value with these products since de-



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He'd say, "Ever notice how much better you do
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warm up before the game!"

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CARBOSE (Sodium CMC) • ETHYLENE DICHLORIDE • PROPYLENE
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SOAP and SANITARY CHEMICALS

AS a research chemist for the AATCC and now as a manufacturer of textile processing chemicals, the author has collected many questions about detergents. Taken from discussions, meetings and forums on detergents, they indicate that for many, detergents provide a real dilemma. The author's answers indicate a solution to this dilemma.

tergents generally do not precipitate or show reduced foaming in the presence of metallic ions. It was soon realized, however, that while foaming may not be affected, and while the metals form soluble compounds, the detergency properties of the synthetic detergents could be greatly improved in hard water by the addition of sequestering agents. The use of sequestering agents today has its place with synthetic detergents as much as with soaps. The availability of many new types of sequestering agents indicates possible new uses for synthetic detergents as well as for soaps.

CMC in Detergents

WHAT about CMC? At the end of World War II technical reports out of Germany showed that the sodium salt of carboxy methyl cellulose, that is to say CMC, had been studied intensively by the Germans and used as a detergent builder during the war. The Germans claimed that CMC was able to replace two or three times its weight of soap when used as a soap extender. The Germans also claimed that they had found the addition of CMC to be remarkably effective in improving the detergency of the anionic sulfonates and sulfates for soiled cotton goods. The Germans pointed out that they considered the action of CMC to be primarily that of a protective colloid, and that the product was particularly effective in preventing the redeposition of dirt onto cotton fabrics when washed with mixtures of anionic detergents and the CMC. The work of the Germans has been borne out to a great degree in the U. S. and we find production of CMC increased greatly. Actually, however, the main use of CMC with detergents is in the manufacture of household detergents based on the

alkylaryl sulfonates derived from petroleum. The alkylaryl sulfonates are particularly notorious in their poor washing qualities of dirty cotton, and the addition of CMC improves these washing qualities greatly.

So far, in textile processing, the use of CMC with detergents has been little indicated and little used. In fact, there is a general consensus that CMC is of little or no importance at the present time either for direct use in the plant to aid detergent solutions or as an additive or builder in detergents being sold in the textile industry.

Importance of Foaming

HOW important is foaming in textile detergent? Perhaps the most effective and direct answer to this question is a statement from a recent book on detergents, which says that "possibly the most widely held wrong idea regarding detergents is that detergency is directly related to foaming power." If this is so, why is good foaming so often desired in a detergent? In fact, I am sure that there are many dyers and finishers who look with a jaundiced eye on any detergency operation in which there isn't a good foam present.

The original assumption that lack of foam in a detergent indicated poor detergency had a sound basis when the only detergent available was soap.

If any lime or magnesium salts were present with soap, or if there were a high concentration of salt, such as in sea water, no foam would be present, and no washing results could be obtained with soap. Therefore, foaming and detergency became associated. With the development of the synthetic detergents, however, the idea that high foam indicated good

detergency still persisted, even though many synthetic detergents showed high foaming and poor detergency. The introduction of detergents which show very little, or no foam, has met with a considerable amount of difficulty, perhaps much more so in the household field than in textile operations.

The physico-chemical factors involved in foam formation are too complex to discuss here; but suffice it to say that the ability to form high foam is related essentially to certain surface tension conditions with respect to air and is not at all related to the ability of a detergent to remove a soil or dirt from a surface.

While in certain isolated cases foam may be desirable, in most operations, however, the presence of foam is only a disadvantage which may interfere with the proper operation of the machinery at high speeds.

Detergent Specialties

WHAT is the place of detergent blends and detergent specialties in textile processing? The fact that the detergency operations involved in the textile industry are so complex; the fact that many types of fibers or blends must be scoured or cleaned, and finally the fact that no single detergent has all the properties which would suit it for all operations has led to the development of detergent blends and detergent specialties. In fact, the great complexity of the detergent problem in textile processing has built a sound place for the companies making detergent specialties and detergent blends.

We have already seen that the addition of builders, of CMC, and of sequestering agents, actually improves the properties of a detergent. Another unusual condition in many cases is the blending of two types of detergents. In many cases it will enhance the properties of either detergent. This is due to a synergistic effect. It is possible to combine one detergent having good wetting properties with another detergent having good emulsifying and suspending properties, thus obtaining a final detergent which has all three of these properties greatly

consider its odor...

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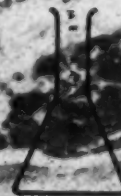
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improved. In addition, we find the possibility of obtaining either high or low foaming effects, good grease and dirt removal, low exhaustion, and many special properties by combination of several detergents.

As a further extension of blending many detergents because of their lack of some one or two properties can be greatly improved by the addition of non detergent materials, which are neither builders nor sequestering agents. For example, in certain processing operation it may be necessary to remove large quantities of grease and oily dirt from a fabric. By the addition of selected solvents to a detergent, it is often possible to prepare a compounded or specialty product which removes the grease and dirt more easily and more cheaply than would the detergent alone in any concentration used. This idea can be expanded greatly.

The use of the compounded detergents and specialty detergent blends is growing rapidly. The use of such products will undoubtedly continue to increase as the processing problems

involving detergency grow in number and complexity.

Problem of Waste Disposal

IS THE use of synthetic detergents creating a new problem in waste disposal and stream pollution? This question has been coming up with increasing intensity within the last few years at various meetings and detergency panels. The problem created by the use of synthetic detergents in textile processing, as far as waste disposal and stream pollution is concerned, is not yet a great one, but it may become acute in particular localities. The most important factor in this problem is that in contradistinction to soap small amounts of many synthetic detergents have a strong emulsifying power in very dilute solution for many agents. When soap is the detergent, the emulsifying power of the soap can be upset easily by hard water, salts, or acids when the waste liquors are brought into a waste disposal plant or allowed to flow into stream. But, in the case of synthetic detergents, the reverse is true, and the

problem remains of destroying the strong suspending powers of synthetic detergents in the waste liquors from plants.

Another factor to be considered, and which has come up on occasion, is the fact that the presence of synthetic detergents in minute quantity in certain streams has been found to have an effect on plant and animal life. The detergents generally have a certain amount of wetting power, and the fact that these detergents are not precipitated or broken up, has in many cases enabled the poisonous materials in the waters, to more easily penetrate and affect the plant or animal life. So far no real answer to this problem is at hand, but one will undoubtedly be found if it becomes more serious.

Detergent Effect on Fabric

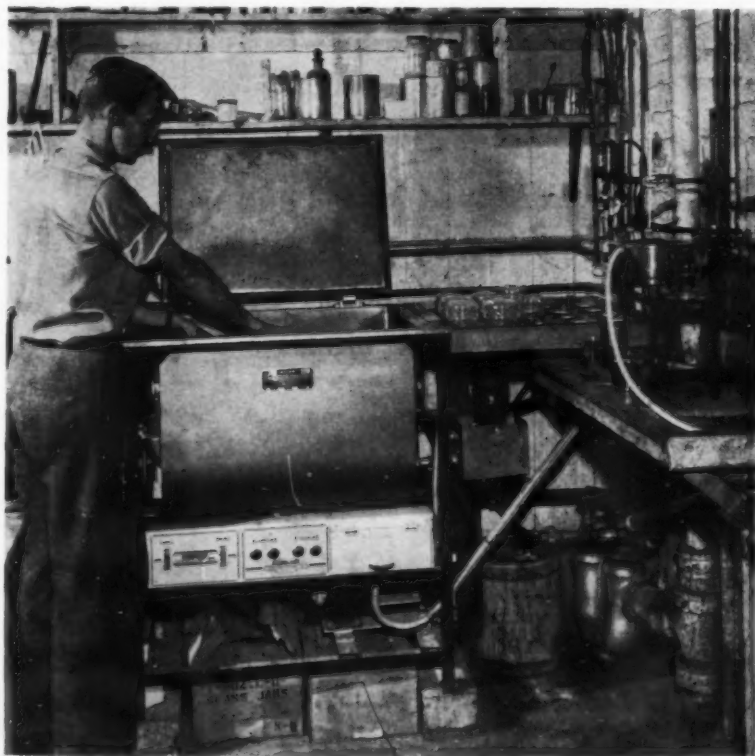
DO THE detergents used in scouring a textile fabric have an effect on the final strength and hand of the fabric? The answer is "Yes," or "No," depending on the detergent and the fabric. In many operations the type of detergent used will have an important effect on both the hand and the tensile strength of the fabric. In certain well defined cases this is well known, but in many others it is not. For example, it is not too difficult to saponify acetate with alkali, and this saponification changes the hand, elasticity, and tensile strength of the fabric. Obviously, the choice of a detergent for acetates is of considerable importance, since it will affect the final hand and strength of the fabric.

In the case of another sensitive fiber, such as wool, the same thing can be true. Wool is sensitive to alkali, and many of the operations involving wool fibers are best carried on with detergents which contain little or no alkali. In addition, wool has a high substantivity for many synthetic detergents. The actual exhaustion of detergents onto the wool accordingly will affect the final hand.

In addition there are many intermediate conditions. In the case of

(Turn to Page 155)

Typical equipment used in studying the action of detergents on standard soiled cloths, is the Launderometer shown here.





TETRASODIUM PYROPHOSPHATE

MONOSODIUM PHOSPHATE

SODIUM ACID PYROPHOSPHATE

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Shave Products

(From Page 47)

ents covering soaps of certain fatty acid derivatives, such as the potassium soap of alpha-glyceryl stearic acid. Such soaps are claimed to yield abundant lather even in hard water. These soaps are said to have certain advantages over coconut oil soap, such as better water-holding properties, slower drying rate on the skin, and to be bland or mild when applied to the face.

All of this naturally suggests that various synthetic detergents or surface active agents, with their ability to remain effective in hard waters, may be of value in formulating lathering shaving creams. Indeed, a number of workers (24,25,26) in this country and abroad have proposed the use of sodium lauryl sulfate or other surface active agents. However, according to Schwartz and Perry, (27) the synthetic detergents have not been received favorably because they tend to remove too much of the natural oil from the skin during shaving.

In addition to sodium lauryl sulfate, other synthetics have been recommended as additives to shaving creams. Goodman, (16) for example, includes sulfonated castor oils in one of his formulas for a lathering product. In Europe, Herwit (28) reports that the protein fatty acid condensation products, called the "Lamepons," are very useful in decreasing lime soap formation and improving the foaming ability. The inclusion of such a material prevents the soap foam from drying quickly and helps to produce a denser, creamier and milder foam. Although recommending the inclusion of these synthetics, Herwit stresses the importance of carefully studying their compatibility with the other components.

This, of course, is a major consideration in the use of all surface active agents. While there can be little doubt that such materials will find their way into the production of lathering shaving creams, their acceptance will depend on how they influence other ingredients, their freedom from

undue drying and irritating effects, and other considerations.

Products Other Than Creams

ALTHOUGH lathering and brushing creams dominate the market, there are millions of men, and thousands of barbers, who prefer to use mugs, cakes, sticks or powders when shaving. Such shaving soaps and powders still form a very important and profitable part of the business of some soap manufacturers. They are generally much more economical to use than the shaving creams and, when well made, will produce a lasting, mild and abundant lather.

The federal specification requires that Type I shaving soaps, which includes cakes, sticks and powders, shall be high-grade products free of caustic alkalinity that yield a heavy, creamy lather that will remain moist upon the face until the shaving is completed. In the case of sticks, the soap must adhere to the face when the stick is moistened and rubbed on. With respect to shaving powders, it is required that the material shall be free-flowing and not cake in the container.

The composition requirements for shaving cakes and sticks are the same. According to the specification, the volatile matter must not exceed 10 per cent in these two kinds of

products and there must be a minimum of 87 per cent anhydrous soap. A maximum of one per cent of free fatty acid and no free alkali are required of all three kinds of soap, including shaving powders. In the case of shaving powders, the proportion of volatile matter must not exceed two per cent, the anhydrous soap content must not be less than 96 per cent, and all of the powdered product should pass through a No. 20 sieve.

In considering the raw materials which go into these shaving soaps, Thomssen and McCutcheon (7) state that a high proportion of stearic acid is essential to help form the desired close, rich, creamy lather. However, a sodium soap made with this material is hard and brittle and rather insoluble. Hence, it is important that sufficient potash lye and perhaps some glycerine be used to make a softer bodied soap. It is also important that from 20 to 25 per cent of coconut oil be included in the soap stock. They advise against the removal of glycerine during saponification because it aids in keeping the finished soap soft.

Producing Good Shave Soaps

THE production of good shaving soaps does not differ greatly from the manufacture of other kinds of fine

(Turn to Page 77)

New "Charme Rose" toilet soap by Tussy, Inc., New York, comes three cakes in box to retail for \$1.50. It is a companion piece to the line of toiletries of the same name developed for the holiday season.





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POTASSIUM PERSULPHATE

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SODA ASH
SODIUM BICARBONATE
SODIUM METASILICATE
SILICATE OF SODA

ZINC STEARATE
TRI SODIUM PHOSPHATE
CALCIUM STEARATE
SYNTHETIC DETERGENTS
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Bishop Drew Sales V.P.

E. F. Drew & Co., New York, recently announced the appointment of Robert H. Bishop, formerly of Sylvania Electric Co., New York, as vice-president in charge of sales. He succeeds George H. Kent, who has been appointed executive vice-president of the company.

Carl V. Serbell Dies

Carl V. Serbell, plant manager at the Edgewater, N. J. plant of Lever Brothers Co., New York, for seventeen years until his retirement in 1949, died on September 20th at his Rivermont, Virginia home. Mr. Serbell joined Lever Bros. in 1931, having worked previously in the Portsmouth Cotton Oil Co., Portsmouth, Va. He was a member of the American Oil Chemists Society, and the Northeast Oil Chemists Society.

FDA Seizes Shampoos

Two shampoo products were seized recently by the Food and Drug Administration on the grounds that the shampoos contained surface active ingredients believed to be irritating to the eyes of users. Products seized were "Oleen Dandruff Treatment Shampoo", allegedly shipped by Curley Co., Philadelphia, and "Purity Cross Dandruff Treatment Shampoo", reportedly shipped by Fairfield Laboratories, Plainfield, N. J. The shampoos were said to contain polyethylene oxide alkyl phenol ether. All of the shampoos are to be withdrawn voluntarily from the market.

Controllers Name Siddall

K. Y. Siddall, comptroller of Procter & Gamble Co., Cincinnati, was appointed recently as a trustee of the Controllership Foundation, research arm of the Controllers Institute, New York. Mr. Siddall has been active

in the Institute since 1938, and served as its president in 1948-49. He was chairman of the board in 1949-50. In



K. Y. SIDDALL

1943-44, Mr. Siddall was president of the organization's Cincinnati Control. The Foundation conducts surveys and studies in financial management.

C. J. Crapp Dies

Charles J. Crapp, 75, founder and president of Quaker Soap Co. of Secaucus, N. J., died Sept. 12, at his home in Montclair, N. J. He is survived by his wife, Mrs. Aline Heitkamp Crapp.

At a recent ceremony in the offices of Davies-Young Soap Co., Dayton, O., 25-year service pins were presented to factory-men Firman Shade and Charles Burkholder by C. F. Young, chairman of the board and himself a veteran of 63 years with the company.



C-P-P Opens K.C. Addition

The board of directors of Colgate-Palmolive-Peet Co., Jersey City, N. J., met for the first time in Kansas City, Oct. 11, for its regular meeting. The meeting was held in conjunction with an official celebration marking the opening of the newest addition to the company's plant in Kansas City. A luncheon in the main ballroom of the Muehlebach Hotel was held preceding the ceremonies.

Among the executives attending the board meeting, luncheon and plant ceremonies were E. H. Little, president; S. B. Colgate, chairman; and board members, W. R. Basset, Henry Colgate, John K. Colgate, J. A. Coulter, H. F. Elberfeld, W. B. Johnson, Manning O'Connor, C. S. Pearce, N. F. S. Russell, Stuart Sherman and J. A. Straka. Also the following vice-presidents: J. H. Blakney, E. E. Dregger, J. L. Elliott, J. R. Gilman, R. E. Healy, H. R. MacMillan and James A. Reilly.

State and city officials were honored guests, and special provisions were made for the luncheon of more than 50 nation-wide press, radio, TV and newsreel representatives at the luncheon as well as at plant ceremonies.

F. W. Fitch Dies

Frederick W. Fitch, 81, founder in 1892 in Boone, Ia., of the shampoo and hair products firm that was to grow to one of the world's largest, died at his home in Des Moines, Oct. 1, after a year's illness. A native of Burnside, Ia., Mr. Fitch operated F. W. Fitch Co. until 1949 when it was sold to Grove Laboratories, St. Louis, for a price reported in excess of \$2,000,000. In 1917, the company moved to Des Moines, and plants were later established in Bayonne, N. J.; Los Angeles; Jackson, Miss., and Toronto. Mr. Fitch is survived by his wife, Mrs. Gertrude Fitch; two sons and two daughters and two brothers.

P&G Buys Pine Land

The purchase of 450,000 acres of pine land near Foley, Fla., to supply a projected plant with cellulose pulp was announced recently by Procter & Gamble Co., Cincinnati.

Yardley Plant Votes Union

Employees of the Union City, N. J., plant of Yardley of London, Inc., New York, voted overwhelmingly in favor of a union shop authorization proposal, it was announced recently by the New York regional office of the National Labor Relations Board. The vote of the company's production and maintenance workers was 225 to five in favor of authorizing their collective bargaining agent to seek a contract with the firm which would make union membership a condition of continued employment. The employees are represented by Local 302, United, Gas, Coke and Chemical Workers of America, CIO. A total of 227 employees excluding clerical and supervisory employees were eligible to vote in the election.

Schneller Joins D'Arcy

Frederic A. Schneller, general merchandising manager of Lever Brothers Co., New York, resigned that post recently to become vice-president of D'Arcy Advertising Co., St. Louis. He had been with Lever since 1947.

In his new post Mr. Schneller will be in charge of the Coca Cola account. An advertising salesman for the *Mil-*



FREDERIC A. SCHNELLER

waukee Journal prior to World War II, he returned to that paper briefly after service in the navy.

Logan Joins Davies-Young

Gene Logan, who formerly operated his own janitor supply company in Mansfield, O., recently joined the sales force of Davies-Young Soap Co., Dayton, O. Mr. Logan's territory includes Michigan, Indiana and Kentucky, where he is calling on jobbers with the "Buckeye" line of sanitary and maintenance supplies.

Samuel Sherman Dies

Samuel N. Sherman, 62, part owner of Standard Products Co., Chicago industrial soaps and chemicals manufacturers, died Sept. 12 in Presbyterian Hospital. He is survived by his widow, Sadye; a son, William S.; two sisters and a brother.

"Igepals" Price Cut

Price reductions of up to five cents a pound for the non-ionic family of surfactants known as "Igepals" were announced late in September by Harold F. Shelton, sales manager of the Antara Products Division of General Dyestuff Corp., New York. Recent streamlining in manufacturing facilities that has cut manufacturing costs make the price reductions possible, Mr. Shelton said.

TGA Convention Dates

Dates for the annual conventions of the Toilet Goods Association for the next three years have been announced as follows: 1952, May 13-15; 1953, May 12-14; 1954, May 11-13. All meetings are scheduled to be held at the Hotel Waldorf-Astoria, New York.

Vote on "No-Rinse" Washes

No rinse detergents failed to win approval of home economics specialists at Ohio Agricultural Experiment Station, Wooster, O., who reported in the station's 69th annual review of its activities as follows:

"Supplementary tests made with the new type of non-rinse detergents with the regular family washing proved them to be unsatisfactory. Soil in the retained wash water deposited in the white fabrics, causing graying. Materials scorched more readily in scorch tests when not rinsed than when rinsed."

Named by National Aniline

Bertram M. Helfaer was appointed recently as research manager of the Buffalo, N. Y. plant of the National Aniline Division of Allied Chemical & Dye Corp., New York. He succeeds Dr. Wesley Minnis, who was transferred recently to New York as director of research. Mr. Helfaer's position carries the title of assistant plant manager, research and development department.

Carbona Chairman Dies

Abraham Wineburgh, 81, one of the founders and principal owners of Carbona Products Co., Long Island City, N. Y., died of a heart ailment at his home in Kings Point, N. Y., Sept. 14. At the time of his death he was chairman of the firm which made cleaning and lighter fluids. He had been an advertising man and was one of the first to advocate the use of streetcar and bus advertising. He had also been a salesman for Edison Corp., selling bulbs and electric fixtures as a supplement to gas illumination. His wife, a son and a daughter survive him.

Soap Assn. 25th Meeting Plans

THE 25th annual meeting of the Association of American Soap & Glycerine Producers, to be held Tuesday and Wednesday, Jan. 21-22, at the Hotel Waldorf-Astoria, New York, in general, will follow the outlines of conventions held in recent years. There are to be four sessions, two group luncheons, the "Maid of Cotton" Fashion Show and the banquet, on the final evening of the meeting. This has been the pattern of meetings held recently.

Innovations planned for the meeting, of which M. L. Westering of Swift & Co., Chicago, is chairman and James A. Reilly of Colgate-Palmolive-Peet Co., Jersey City, is vice-chairman, include at least one speaker of prominence from an outstanding college or university, the awarding of television sets as door prizes at two of the general sessions. In addition, the day before the convention opens, there will be a meeting of the Fatty Acid Division of the association.

Other convention committee members include, besides Roy W. Peet, association manager, J. Malcolm Miller, E. Scott Pattison and Frank W. Luther of the association office, Lawrence H. Flett of National Aniline Division of Allied Chemical & Dye Corp., New York; Ira P. MacNair of MacNair-Dorland Co., New York; E. D. McCleod of Arnold, Hoffman Co., New York; M. J. Roche of Lever Brothers Co., New York; R. O. Trowbridge of Colgate-Palmolive-Peet Co., Jersey City, N. J.; William G. Werner of Procter & Gamble Co., Cincinnati; Russell H. Young of Davies-Young Soap Co., Dayton, O., and S. D. Andrews of General Mills, Inc., Minneapolis.

The present tentative program outline calls for registration and "Get Acquainted Hour" from 8:30 a.m. until 10:30 a.m., Jan. 21, when the opening session is to be convened in the Starlight Ballroom. At this session Neil H. McElroy, president of Procter & Gamble Co., Cincinnati, and AASGP president, will give his president's address. Other subjects tentatively set to

be covered at this session include "Market Research — Household Soap Trends," and the business outlook for 1952. At the conclusion of the first morning's session there is to be a group luncheon at 12:30 p.m., at which a prominent government or industrial figure will speak. The Specialty Soap Division meets at 2:15 in the Peacock Lounge, at the same time the Glycerine and Fatty Acid Divisions hold a combined meeting. The "Washable Cotton Fashion Show" concludes the first afternoon's activities in the Starlight Ballroom at 4:00 p.m. Also on the social side is the reception in the Sert Room from six to eight p.m.

Breakfast, the host for which is to be one of the publishing groups, will start the second day of the meeting in the Empire Room. The general session gets under way at 9:45 p.m. Topics slated for coverage include a discussion of what's ahead for fats and oils in '52, the synthetic detergent picture and the situation on raw materials. The Wednesday luncheon will be held in the grand ballroom, following which there is to be a meeting of the association's board of directors. At 3:00 p.m., the Industrial Soap Division meets in the West Foyer. Preparatory to the concluding event of the meeting, the annual banquet in the Grand Ballroom, there will be a reception for the guests of honor in the Carpenter suite. Dancing and entertainment, as well as an address by an outstanding figure are scheduled for the banquet.

Lever New Orleans Office

A New Orleans division office from which a number of southern states will be covered will be opened in the near future, it was announced recently by Lever Brothers Co., New York. The new office, which will be in charge of H. H. Yates, formerly sales manager for the Houston division, will serve Louisiana, Alabama, Mississippi, Western Tennessee and some neighboring counties in Texas, Florida and Oklahoma.

P. R. Rogerie will be manager of the New Orleans area under the

new arrangement and A. B. Schmitt is in charge of the Shreveport area. The new division was formed by taking parts of territories formerly under division offices in Houston, Kansas City, and Atlanta.

Other area managers of the division are Don Barclay, Little Rock area; Walker Davis, Memphis area; F. L. Ray, Birmingham area, and A. H. Moss.

A. B. Schmitt, formerly of the New Orleans area, and who was appointed manager of the Shreveport, La., area, started with Lever in Shreveport in 1941. He has served in Baton Rouge, Corsicana and New Orleans.

Other Lever changes include the appointment of Roy V. Marsh as sales manager of the Houston division succeeding Mr. Yates. In addition, Robert B. Osborn, formerly of Toni Co., Chicago, has been made assistant advertising brand manager for "Lux" toilet soap, "Lux" flakes and "Silver Dust," it was announced recently by James A. Barnett, vice-president in charge of advertising.

Leaving Lever Brothers is William J. Luedke, product manager of the company's Pepsodent division. He resigned to join the plans and merchandising board of N. W. Ayer & Son, Philadelphia. Before joining Lever in 1948 he was vice-president in charge of advertising and sales promotion for O-Cedar Corp., Chicago.

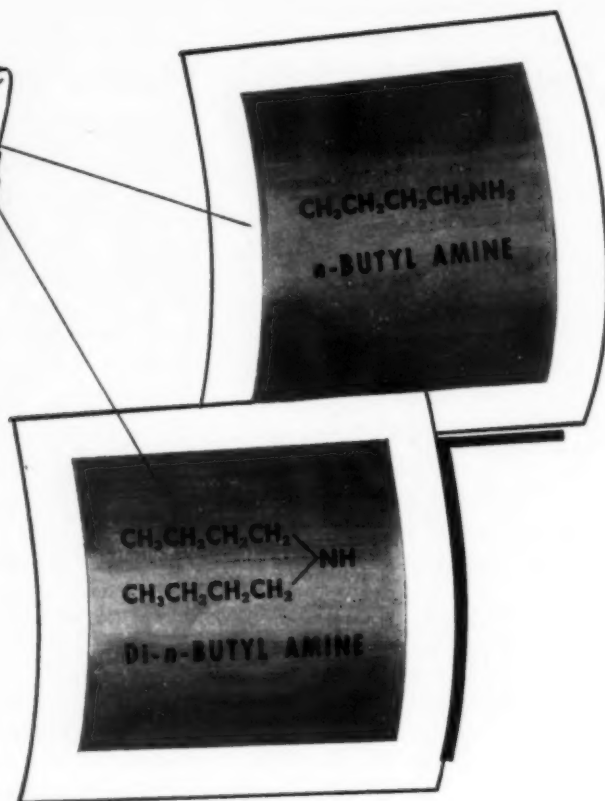
Boston Bims Golf Final

The final golf outing of the BIMS of Boston, held at Nashua (N. H.) Country Club, Sept. 12, was won by Sterling P. Barron, Rexall Drug Co., Boston. Other prize winners were T. J. Conlon of Dow Chemical Co.; Hart Harris, Jr., of S. B. Penick & Co., chairman of the executive committee; Warren E. Kell, Ungerer & Co.; Harold Coleman, Rexall Drug Co.; D. P. Newall, Howe & French, Inc.; James Barnes, S. S. Pearce & Co., and James A. Farley of Commercial Solvents Corp.

Tribute was paid to the memory of Paul Mulvanity of Nashua Gummed & Coated Paper Co., who died recently. He was a charter member of the BIMS of Boston.



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How you can use them . . .

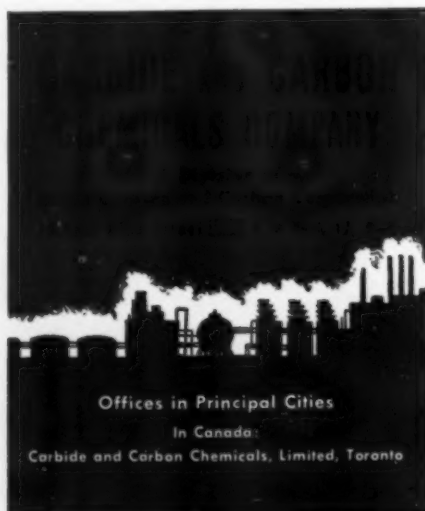
- fatty acid soaps of butyl amines are useful for preparing water-in-oil emulsions.
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rubber chemicals	insecticides
flotation agents	pharmaceuticals

Butyl Amine and Dibutyl Amine may be just the answer to your product or process problem. Check them now by asking for samples and information on your company letterhead. Be sure to ask for technical bulletin F-6871A, "Butyl Amines."

MORE THAN 60 OTHER AMINES

When you are considering alkyl amines, keep in mind that CARBIDE also supplies Ethyl, Diethyl, Triethyl, Isopropyl, Diisopropyl, 2-Ethylhexyl, and Di(2-Ethylhexyl) amines. But that's not all! CARBIDE also makes more than 60 other amines. Get a complete list of these by asking for our 1952 edition of "Physical Properties of Synthetic Organic Chemicals," Form 6136.



Oil Chemists Hold 25th Meeting

CONCURRENT sessions marked the 25th annual fall meeting of the American Oil Chemists Society held Oct. 8, 9 and 10, at the Edgewater Beach Hotel, Chicago. Field trips were held the fourth day of the meeting, Oct. 11. General chairman of the meeting was C. E. Morris of Armour and Co., Chicago, and H. T. Spanuth of Wilson & Co., Chicago, was program chairman.

Field trips were to be made to the Food and Container Institute, Quartermaster Corps, Chicago, and the plant of S. C. Johnson and Son, Inc., Racine, Wis.

Among 54 papers presented during the three-day meeting were the address of welcome given the first morning by Victor Conquest, vice-president of Armour and Co., and general manager of the research and development division. Following this, George L. Prichard of the Production and Marketing Administration of the U. S. Department of Agriculture in Washington spoke on "The Current Economic Situation as Related to the Oils and Fats Industry."

Approximately 21 suppliers of equipment and testing apparatus were to exhibit. They included:

E. H. Sargent & Co., Chicago; L. A. Salamon & Bro., New York; Wurster & Sanger, Inc., Chicago; H. Reeve Angel & Co., New York; Blaw-Knox Co., Pittsburgh; Brinkman & Co., Great Neck, N. Y.; Schaar & Co., Chicago; Coleman Electric Co., Maywood, Ill.; Central Scientific Co., Chicago; Foster Wheeler Corp., New York; Encyclopedia Britannica, Chicago; Atlas Powder Co., Wilmington, Del.; Kimble Glass Co., Toledo; Seedburo Equipment Co., Chicago; Laboratory Construction Co., Kansas City, Mo.; De Laval Separator Co., New York; Ercona Corp., New York; Girdler Corp., Louisville, Ky.; Industrial Chemical Sales Division, West Virginia Pulp & Paper Co., Chicago; Arthur S. LaPine & Co., Chicago; Niagara Filter Corp., Buffalo.

Among the papers dealing with detergents presented at the meeting were measurement of detergency using artificially soiled clothes by F. L. Diehl and J. B. Crowe of Procter & Gamble Co., Cincinnati; detergent methods by J. C. Harris of Monsanto Chemical Co., Dayton, O.; detergents from animal fats by W. C. Ault of the Eastern

Regional Research Laboratory, Philadelphia; lime soap dispersing powers of synthetic detergents by A. M. Schwartz of Harris Research Laboratories, Washington, D. C.; nonionics, by R. L. Mayhew, General Aniline & Film Corp., New York; measurement of foam power of various detergent systems by G. V. Scott of Colgate-Palmolive-Peet Co., Jersey City, N. J.; flake form nonionic surfactants derived from a new hydrophobic base by Thomas H. Vaughn of Wyandotte Chemicals Corp., Wyandotte, Mich.; and action of chelating agents in detergents by H. W. Zussman of Alrose Chemical Co., Providence.

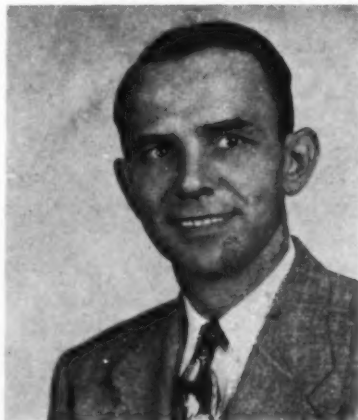
Farley Joins Baker

Walter H. Farley, formerly with Chas. L. Huisking & Co., Brooklyn, recently joined J. I. Baker Chemical Co., Phillipsburg, N. J., in an executive capacity. He has been associated for many years with the chemical industry, and is a member of the special functions committee of the Salesmen's Association of the American Chemical Industry.

Harmon Joins Hardesty

William S. Harmon, formerly connected with the engineering and research department of Merck & Co., Rahway, N. J., recently joined the staff of Hardesty & Co., New York, as technical director with headquarters in the Philadelphia plant. This

WILLIAM S. HARMON



latest appointment to the Hardesty staff is in keeping with the company's policy of further improving the quality of its stearic acid, red oil, hydrogenated animal and hydrogenated fish oil fatty acid.

P&G Man ACS Chairman

T. S. McDonald, chemical supervisor of Procter & Gamble's Dallas plant, was recently elected chairman of the Dallas-Fort Worth Section of the American Chemical Society.

Name Minich Vice-President

Arthur Minich, formerly vice-president in charge of research and development, was appointed recently as executive vice-president of Nuodex Products Co., Elizabeth, N. J. Under his direction, the company developed Napalm, the gelling agent for gasoline used in incendiary bombs and flame throwers. He has been with Nuodex since 1932 when he joined the firm as a chemist in the year it was founded.

Wins Schultes Trophy

Peter L. Forsman, vice-president of C. H. Forsman Co., New York, won the Martin F. Schultes Memorial Golf Tournament held recently at Plandome Golf Club, Plandome, N. Y. The tournament was sponsored by the BIMS of New York and was restricted to members of that organization, of which Mr. Schultes was one of the founders. The trophy, an inscribed silver bowl, must be won three times before it becomes the permanent possession of a member. A smaller replica is given each year to the winner of the tournament.

Other winners included:

Ross A. White, E. N. Rowell Co.; J. Dudley Shaw, Allen B. Wrisley Co.; Fred A. Parker, Pond's Extract Co.; John G. Kemp, Warner-Hudnut, Inc.; Charles B. Darcey; William F. Zimmerman, W. F. Zimmerman, Inc.; C. G. Twiname, B. Altman & Co.; Cecil W. Rice, W. J. Bush & Co.; C. R. Keeley, Beauty Fashion; Harry C. Griffiths, Pennsylvania Drug Co.; John A. Owens, Lachman-Novasel Paper Corp.; Walter J. Jamieson, Walter J. Jamieson Corp.; Charles W. Darr, Snyder Box Co.; John E. Gabrielson, Avon Products, Inc.; Frank L. Kiernan, Kiernan-Hughes Co.; James McInnes, Commercial Solvents Corp.; Donald F. Leyden, Hampden Glazed Paper & Card Co.

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- GERANIUM
- GINGER
- LAVENDER
- LEMON
- LEMONGRASS
- LIMES
- MACE
- NUTMEG
- ORIGANUM

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- PEPPER
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- ROSE BULGARIAN
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- VETIVERT
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Stocks Carried in Principal Cities

Fatty Acid Group Meets

A program for the collection of industry statistics was approved by members of the Fatty Acid Section, Association of American Soap & Glycerine Producers, Inc., at a meeting held at the Waldorf-Astoria Hotel, New York on September 21st. Subsequent approval by the Association's board of directors took place at a meeting in Chicago on September 27th. It is expected that over 90 per cent of the industry will furnish monthly data on production and sales of fatty acids in ten classifications. While reports of individual members are fully confidential, totals will be released generally to the trade and others interested. Collection begins with the October figures. K. K. Boyd of Emery Industries, Inc., Cincinnati, is chairman of the committee in charge of the statistics program.

Preliminary plans to establish sound techniques for the evaluation of soapstocks were reported to the group by Dr. George Zinzalian, E. F. Drew & Company, New York, chairman of the technical committee. This work will involve cooperative study with the A.O.C.S. as to test methods, and with oil producers' groups as to standards of evaluation.

A committee headed by Sewall Andrews of General Mills, Inc., Minneapolis, will work on plans for the 25th annual convention of A.A.S.G.P., January 21-23, 1952.

An education and publicity committee is also being appointed to

develop plans for putting a clear picture of the scope of the industry and its products before user industries and others concerned. E. A. Moss, Swift & Company, Chicago, presided at the meeting as chairman of the steering committee. E. Scott Pattison is manager of the group on the Association staff.



CHARLES V. DOUGLAS

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Charles V. Douglas, manager of the chemical division of Arvey Corp., Chicago, was elected recently as vice-president of the division. He joined Arvey last October when it purchased the Memphis, Tenn., plant of Heyden Chemical Corp., New York. The Memphis plant produces liquid caustic soda and chlorine. Since 1948, Mr. Douglas had been assistant to the president of Heyden. Prior to that he was New York branch manager for Diamond Alkali Co., Cleveland. He is continuing to maintain his headquarters in New York.

U.K. Santomerse Production

Large quantities of the dodecyl benzene sulfonate detergent, "Santomerse," have been turned out at the new Monsanto Chemicals, Ltd. plant in Newport, Monmouthshire, England, since operations began in 1949, a recent report of *Manufacturing Chemist* states.

At Fatty Acid Section Meeting

On left hand side of table (from left to right): front row, K. K. Boyd, Emery Industries, Inc.; W. C. Hardesty, Hardesty & Co.; C. C. Oliver, Lever Brothers Co.; R. P. O'Rourke, Woburn Chemical Co.; E. W. Adams, A. Gross & Co.; S. Goranflo, Wilsen-Martin Division, Wilson & Co.; J. W. Howell, El Dorado Oil Works.

Rear row, J. Malcolm Miller, Association office; W. W. Fischer, Hardesty & Co.; I. Schnitzer, Woburn; Frank J. Reilly, Soap & Sanitary Chemicals; D. L. Weatherhead, Darling & Co.; Frank W. Luther, Association office; S. K. Plasman, Armour & Co.

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- LEMONGRASS
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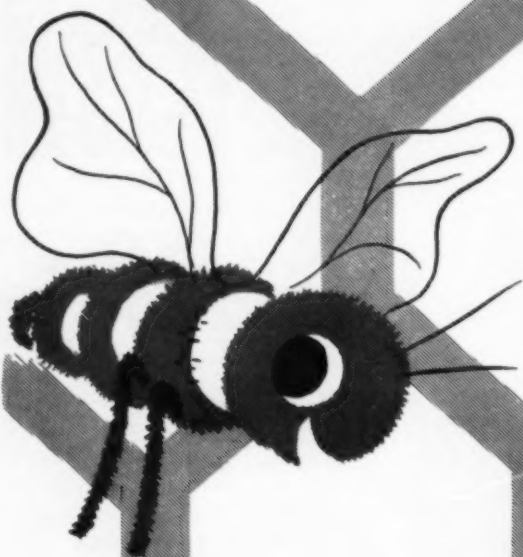
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You well know PQ Soluble Silicates' ability to improve soap's work in taking the dirt out and keeping it out. This same property acts hand-in-hand with your synthetic detergents to increase their efficiency.

Experience shows that by replacing from 10 up to 50% of more expensive builders with the less expensive alkaline soluble silicates, good or better detergency is obtained. A further advantage is the effectiveness of soluble silicate in protecting metals from attack by the synthetics.

Add wider versatility to your detergents and cleaning compounds with efficient PQ Silicates. May we discuss how you can use them in your process?

PHILADELPHIA QUARTZ COMPANY

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SOAP and SANITARY CHEMICALS

Watson Joins Verley

Rupert C. Watson, formerly sales manager of Fleuroma, Inc., New York, essential oil and perfuming



RUPERT C. WATSON

materials firm, was appointed recently as a sales representative for Albert Verley & Co., Chicago. He is making his headquarters in the New York office of Verley and will cover the New York metropolitan area, Philadelphia, and New England, including Boston. Mr. Watson joined Fleuroma in 1947, having previously been American resident partner and managing director of Firmenich and Co., New York. Earlier he had been with Ungerer and Co., New York, as a salesman and sales manager, subsequent to beginning his career in the essential oil and allied industries in 1924 when he was associated with *Drug and Chemical Markets*. Mr. Watson also worked for the *Oil, Paint & Drug Reporter*.

At the same time it was announced that Victor Marquis, who had formerly been with Compagnie Parento, Inc., Croton-on-Hudson, N. Y., had also joined Verley. He is covering the metropolitan New York area for the firm.

New Magnus Metal Cleaner

A new cleaner for all kinds of metal parts was announced recently by Magnus Chemical Co., Garwood, N. J. The new cleaner, "Magnus 751", is said to be safe for all metals, not attacking, pitting or marring aluminum alloys, bearing metals, cadmium, solder, die cast or any other soft metal.

It is non-inflammable. The new cleaner can be used in either hot or cold solution and is followed by a cold water rinse after the cleaning period. "Magnus 751" follows closely Navy Aeronautical Specification C-86 and Army-Navy Aeronautical Specification AN-C-163.

Westvaco Names Elphick

Neil C. Elphick has been appointed resident manager of the \$2,200,000 nitric acid plant being constructed by Westvaco Chemical Division of Food Machinery and Chemical Corp. for the U. S. Government at the Sunflower Ordnance Depot, Kansas.

Mr. Elphick has been assistant manager of the Westvaco Division's Carteret, N. J. plant since June, 1950, after serving as a production specialist in the New York office. He joined Westvaco in 1941 after graduating from Clemson College.

N.A.V.S. Trade Show Dates

Spring trade show dates scheduled for 1952 by the National Association of Variety Stores will be held Jan. 13-16, at the Baker Hotel, Dallas, Tex.; Feb. 3-7, at the La Salle Hotel, Chicago, and Feb. 17-20, at the Municipal Auditorium, Atlanta, Ga., it was announced recently. Merchandise ranging in price from five cents to \$5.00 will be exhibited.

Army Honors G. R. Vila

George R. Vila, general sales manager of the Naugatuck Chemical division, United States Rubber Co., New York, was honored recently by the U. S. Army for his services with the Technical Industrial Intelligence Committee of the Joint Chiefs of Staff during World War II. He received a certificate of appreciation from Major General C. G. Halnick, commanding general of the New England Sub-area, for his work as a member of a group of six top flight rubber scientists who investigated the research phases of the German synthetic rubber industry in 1945.

Macauley DCAT Chairman

Charles M. Macauley of Prophy-lac-tic Brush Co., New York, was elected chairman of the Drug, Chem-



CHARLES M. MACAULEY

ical and Allied Trades Section of the New York Board of Trade at its 61st annual meeting, held Sept. 20-22 at Shawnee-on-Delaware, Pa. He succeeds Charles P. Walker, Jr., of Chas. Pfizer & Co., Brooklyn, who was elected Section representative to the board of directors of the New York Board of Trade.

Other officers in addition to Mr. Macauley who will serve during the next fiscal year are: vice-chairman, Lloyd I. Volckening, president of Ivers-Lee Co.; treasurer, Hugh S. Crosson, McKesson & Robbins, Inc., (reelected); secretary, Helen Booth (re-elected). James G. Flanagan, vice-president of S. B. Penick & Co., was reappointed counsel.

The personnel of the new executive committee (exclusive of officers) elected at the business session follows:

Murray Breese, Murray Breese Associates; Ralph A. Clark, J. T. Baker Chemical Co.; Stanley I. Clark, Sterling Drug Inc.; Harold F. Cummings, Vit-American Oil Corp.; Donald S. Cushman, Inuis, Speiden & Co.; Dudley Dunlop, Mallinckrodt Chemical Works; Russel J. Fosbinder, The Maltbie Laboratories, Inc.; Claude A. Hanford, Pharmaco, Inc.; J. David Hayden, Gelatin Products Div., R. P. Scherer Corp.; Wm. W. Huisking, Chas. L. Huisking & Co., Inc.; H. C. McKenzie, Ortho Pharmaceutical Corp.; George S. McMillan, Bristol-Myers Company; W. Boyd O'Connor, Ayerst, McKenna & Harrison, Ltd.; Fred G. Singer, E. I. duPont de Nemours & Co.; Sydney N.



There is nothing like a Givaudan fragrance !

Givaudan soap fragrances really work . . . they attract customers because they are based on a specialized knowledge of consumer preferences . . . on a thorough understanding of soap materials. Let Givaudan fragrances help your soaps sell themselves.

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Stokes, Merck & Co., Inc.; Stephen F. Urban, E. R. Squibb & Sons.

The 26th annual dinner of the DCAT will be held Thursday evening, March 6, 1952 at the Hotel Waldorf-Astoria it was voted by the executive committee.

Contract to Fine Organics

Fine Organics, Inc., New York, recently announced that it had been awarded a research contract by the U. S. Navy Ordnance Bureau to develop production methods for critical chemicals. The contract is on a cost plus fixed fee basis for an undisclosed sum.

Free Palm Oil Exports

Export allocations on palm oil have been discontinued and the Office of International Trade, U. S. Department of Commerce, is now authorized to place palm oil under general license, it was announced recently by the U. S. Department of Agriculture, Washington, D. C. The action took effect Oct. 1, 1951. The Department also stated that no limits have been placed on the total quantity of oiticica oil and coconut oil which may be licensed for export during the period October through December. However, individual export licenses will still be required and applications will continue to be screened to prevent shipment of "unreasonable quantities". Export allocations of 100,000 pounds of commercial and sulphonated castor oil were announced for the fourth quarter.

No. Calif. Oil Chems. Meet

The second meeting of the Northern California Oil Chemists is scheduled for Friday, Nov. 2, at Fable's restaurant, 340 Stockton St., San Francisco. In addition to first-hand reports on the Chicago convention of the American Oil Chemists' Society, which was held Oct. 8-10, there are to be round table discussions on topics of interest to oil scientists and technologists. A new steering committee will be elected to serve for the ensuing year.

New Solvay Managers

The appointment of new sales and branch managers for several departments and district offices was an-



N. DRAPER



H. R. STOOHOFF

nounced recently by Solvay Sales Division, Allied Chemical & Dye Corp., New York. Affected were Neal M. Draper, formerly manager of the St. Louis branch, who moves to the New York executive offices as manager of the ammonium and potassium products department. Harry R. Stoothoff, who has been assistant manager of the



E. J. SEENER



V. W. AUBEL

Chicago branch office, becomes manager of the special alkalies and cleansers department. Verne W. Aubel, Jr., has been advanced from supervisor to manager of the calcium chloride department.

E. J. Seener succeeds Mr. Draper as branch manager of the St. Louis office, where he had been assistant manager for the past four years. A. Benjamin Kennedy is the new

A. PHILLIPPS, JR.



A. B. KENNEDY



branch manager of Solvay's Detroit office, succeeding Arthur Phillipps, Jr., who is filling the newly created post of assistant to Solvay's director of sales.

Robert Back from Paris

Henri Robert, director of the de Laire Division of Dodge & Olcott, Inc., New York, recently returned from a three month visit to Paris, where he spent most of the summer working on new perfume specialties at the Laboratories of Fabriques de Laire, Issy le Moulineaux, and Calais.

Lueders Honors Sroka

George A. Sroka, assistant manager of the Chicago branch of George Lueders & Co., New York, celebrated his 25th anniversary with the company on Sept. 26, and thus became the 51st member of the firm's veterans' organization. He received the usual service pin, wrist watch and gifts from the officers, directors and employees of the company. The manager of the Lueders' Chicago office, William F. Kammerer, has been a member of the veterans' organization since 1948.

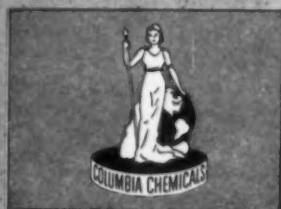
Joseph Wrench Dies

Joseph Wrench, 74, who was associated with the chemical division of West Virginia Pulp and Paper Co., New York, for 34 years before his retirement in 1946, died Sept. 15, at Roslyn, N. Y. Born in England in 1877, Mr. Wrench was associated with the Electrolytic Alkali Co., Middleswich, England from 1902 until 1912. He came to the United States in 1912 to join the chemical division of the paper company, which at that time operated under the name, Industrial Chemical Co. Mr. Wrench continued with the company until his retirement in 1946, serving for many years as sales manager and treasurer. He was a charter member of the Salesmen's Association of the American Chemical Industry and the first secretary of the Industrial Alcohol Institute, Inc. He is survived by a daughter, Mrs. Joan Salerno and a son, D. James Wrench, also of Roslyn.

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Whether you've been accustomed to doing business in the past with Columbia Chemical Division of Pittsburgh Plate Glass Company, or with Southern Alkali Corporation, you'll continue to find the same competent personnel—in every department—welcoming the opportunity to serve you as Columbia-Southern . . . through strategically located plants and offices.

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DISTRICT OFFICES: Boston • Charlotte • Chicago • Cincinnati • Cleveland • Dallas • Houston • Minneapolis • New Orleans • New York
Philadelphia • Pittsburgh • St. Louis

Lever Names Barclay

Don R. Barclay was recently named manager of the Little Rock area for Lever Brothers Co., New York. He succeeds Robert W. Ruth-erford, who has been transferred to the Kansas City Division as sales supervisor.

Stokes Names La Towsky

Harry R. La Towsky, Jr., was appointed recently to the New Eng-land sales staff of F. J. Stokes Ma-chine Co., Philadelphia. A graduate of Massachusetts Institute of Technology, Mr. La Towsky is making his head-quarters at 71 Charles St., Boston. He is working under the direction of Harold F. Roman, New England Dis-trict manager.

Court Rules Against Fitch

Removal of his two sons and two sons-in-law as trustees of a \$2,000,000 fund set up for them in 1926 by F. W. Fitch, head of the shampoo firm bearing his name, was refused recently by a district court ruling in Des Moines. The long legal fight was ended when District Judge O. S. Franklin refused to remove the four trustees but ruled that the court must approve all future salaries, divi-dends and other business of the trust. Mr. Fitch, who died Oct. 1, filed suit against his two sons, Gail W. Fitch and Lucius W. Fitch, and his two sons-in-law, Lester Sandahl and Rich-ard Young asking they be removed on the ground that they were guilty of mismanaging the trust and paying themselves excessive salaries.

F. W. Fitch Co., which was sold in 1949 to Grove Laboratories was reported to have had annual sales of \$12,000,000. During the trust suit it was brought out that Mr. Fitch sold the firm for \$2,000,000 because it was the only alternative to bankruptcy.

Klaussen Hooker V.P.

The election of Bjarne Klaus-sen as executive vice-president of Hooker Electrochemical Co., Niagara Falls, N. Y., was announced recently. At the same time the appointment of

Donald E. Springer as chief engineer of the firm was made known.

Mr. Klaussen, a graduate of the University of Oslo (Sweden), joined



B. KLAUSSEN



D. E. SPRINGER

the Hooker organization as a research chemist in 1916. He was head of the fine chemicals department at one time, also shift superintendent, office man-ager, plant superintendent and works manager of the Niagara plant. Since 1947, he has served as vice-president of production for all Hooker plants.

Mr. Springer joined Hooker in 1936 and has been assistant chief engi-neer since May of this year. Previously he worked on special projects such as the design of the Hooker-Detrex plant in Ashtabula, O. He has been asso-ciated with the company's engineering department since 1941.

Lillian Koppelman Dies

Lillian Koppelman, retired sec-etary of U. S. Sanitary Specialties Corp., Chicago, died in New York on Sept. 12. She was the sister of the late Harold Koppelman, who founded the corporation. Miss Koppelman served as secretary of the organization from 1917 until she retired in 1930.

Changes at Grasselli

Carl W. Peterson, assistant dis-trict sales manager in Chicago for the Grasselli Chemicals Department of E. I. du Pont de Nemours & Co., Wil-mington, Del., since 1947, was trans-ferred recently to the department's manufacturing division at the Gras-selli Works, Grasselli, N. J., Oct. 1. William B. M. Tracy, Jr., Grasselli export manager of Wilmington, suc-ceeds Mr. Peterson as assistant district sales manager in Chicago and George A. Wright, assistant district sales man-ager in New York, replaces Mr. Tracy.

So. Alkali Name Change

The corporate name of South-ern Alkali Corp. was changed recently to Columbia-Southern Chemical Corp. A wholly owned subsidiary of Pitts-burgh Plate Glass Co., Pittsburgh, the firm is a producer of soda ash, chlorine, caustic soda and related chemicals. Plants are located at Barberton, O.; Corpus Christi, Tex.; Natrium, W. Va.; Lake Charles, La.; and Bartlett, Calif. Clarence M. Brown, chairman of the board for both Pittsburgh Plate Glass Co. and Columbia-Southern Chemical Corp. stated that the action involves a change in name only.

Postpone Soap Hearings

Hearings on Senator Gillette's bill (S.B. 345) designed to bring soap under the Food, Drug and Cosmetic Act, were indefinitely postponed, it was announced recently. The hearings, originally scheduled for Sept. 11, were to be conducted by the subcommittee of the Senate committee on Labor and Public Welfare, with Senator Herbert M. Lehman of New York presiding. The bill would call for the elimination of the exemption of soap from the Act.

Names Singmaster

The appointment of James A. Singmaster, Jr., as assistant general branch manager of the New York office of Monsanto Chemical Co., St. Louis, was announced recently by Rob-inson Ord, general sales manager of the company's organic chemicals division. Growing volume and importance of eastern markets for the company's products call for an additional assis-tant manager, Mr. Ord said. Clifford S. Heathcote has been assistant manager since 1943. Both Mr. Singmaster and Mr. Heathcote report to William M. Russell, general branch manager.

Prior to joining Monsanto, Mr. Singmaster was general manager of sales at Bainbridge, N. Y. for Casein Company of America, a division of Borden Co. More recently he has been Monsanto's senior sales representative for upper New York state. Mr. Sing-master received a B.A. degree in busi-ness administration from Williams Col-lege in 1929 and an M.B.A. degree in 1931 from Harvard University.

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THE ECONOMICAL DETERGENT SILICATE

Cowles DRYMET, anhydrous sodium metasilicate, is the most highly concentrated form of sodium metasilicate available. It is more economical to use, on the basis of both Na_2O (alkalinity) and SiO_2 (silicate) than any other type of hydrated or anhydrous detergent silicate, either compounded or by itself. DRYMET contains no water of crystallization.

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THE ALL-PURPOSE DETERGENT SILICATE

Cowles DRYSEQ, anhydrous sodium sesquisilicate, is a medium pH alkaline cleaner which will do fast, dependable work at a low cost to the user. It is a white, free-flowing powder, quickly and completely soluble in hot or cold water—containing 56.75% Na_2O —making it an economical base material for compounding.



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DRYORTH *

THE HEAVY-DUTY DETERGENT SILICATE

Cowles DRYORTH, anhydrous sodium orthosilicate, is a powerful, speedy, heavy-duty cleaner with valuable penetrating and wetting-out properties, reinforced dirt-removing power and unusual emulsifying action. It is an anhydrous, free-flowing powdered silicate containing not less than 60% Na_2O , which may also be used as an economical constituent of high pH cleaning compounds.

CRYSTAMET *

THE MEDIUM pH DETERGENT SILICATE

Cowles CRYSTAMET is a pure, perfectly white, free-flowing granular pentahydrate sodium metasilicate with the normal 42% water of crystallization. Suggested for compounding when it is desirable to lower the concentration of a finished product. Readily soluble—chemically stable—easy to handle. Can be used on medium pH jobs.

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HEAVY CHEMICALS DEPARTMENT • CLEVELAND 3, OHIO

SOAP and SANITARY CHEMICALS

Describes Solexol Oil Process

THE Solexol process of decolorizing oils has been found particularly useful in upgrading cottonseed oil, according to studies reported by Edward M. James, Lever Brothers Co., New York, guest speaker at the first 1951 fall meeting of the Northeast Oil Chemists' Society, held October 2nd, at the Building Trades Employers Association, New York. Besides Mr. James' discussion, the Society held a business session, voting to formalize membership in the Society and to issue membership cards. Annual dues were set at two dollars.

President W. A. Peterson, Colgate-Palmolive-Peet Co., Jersey City, N. J., announced that the next meeting of the Society would be held December 5th at the Military Park Hotel, Newark, N. J. A paper on the decolorization of vegetable oils is tentatively scheduled for that meeting.

A membership committee, with J. Costigan, Sharples Corp., New York, as chairman, was appointed by the president. Other members of the committee are A. Kramer, L. A. Salomon & Bros., New York and J. O'Brien, Baker Castor Oil Co., Bayonne, N. J. and Frank Shea of C. F. Simonin & Sons, Philadelphia, was appointed publicity director.

The Solexol process of decolorizing oils, as applied to cottonseed and soybean oils, is based on liquid-liquid extraction with propane, Mr. James said. At about 120°F. the oil is completely soluble in the solvent. As the temperature is increased, the solution tends to separate into two phases. The separation taking place under uni-thermal conditions.

In a continuous operation of the decolorization tower, part of the bottoms are refluxed. This may be done in an external process, under uni-thermal conditions, which would allow the tower to start up more rapidly. However, under this method, more equipment is needed than by operating the tower at a gradient, and the unit requires 24-hour attendance. Internal reflux is more simple and easier to control. When operating the tower in

a gradient, the top part acts as a rectifier, and the bottom is a stripping section. The triglycerides are stripped out in the bottom.

In considering operation variables, it is interesting to note that a high propane content gives more effective separation, but that solubility is increased also. The top temperature controls the degree of separation, higher temperatures increasing the yield. However, too large a gradient will trap masses of rejected material within the tower, thus flooding it. The pressure is normally 30 to 50 psi above the vapor pressure of propane; higher pressures increase solubility. The settling properties are important also, to maintain equilibrium.

The tower capacity depends on the solvent ratio. In working with a 10:1 ratio of oil to solvent, the tower was found to be unstable. More satisfactory operation was obtained with a 20:1 ratio, which was the ratio used in the studies conducted on cottonseed and soybean oils. The top temperature was maintained at 168°F., and the bottom at 163°F., forming a gradient of five degrees.

Soybean oil is readily decolorized by this method, although close temperature control is required. The color bodies and phosphatides are removed, although some chlorophyll does go with the overhead. (50 to 75 micrograms were found in the overheads, as compared with 1800 to 3000 micrograms in the original sample.)

The bottoms yield depends on the amount of neutral oil in the original crude plus the free fatty acids. Soybean bottoms consist largely of phosphatides and some triglycerides. It was thought the bottoms could be used in the manufacture of lecithin, because of the high content of phosphatides (65 per cent); however, the color was too dark to allow satisfactory use in this application. Soybean overheads were found to finish to a satisfactory shortening.

One of the advantages of decolorizing by the Solexol method, is that less bleaching earth is required for

overheads, and some cases have been reported in which the keeping quality of the oil is improved.

In the course of the discussion following the presentation of the paper, it was indicated that the method might be applied to decolorizing tallow intended for use in soap manufacture. Mr. James stated, however, that only a partial improvement of the yellow grease is effected, and that a good whitestuff is not produced.

An interesting comparison of the upgrading of the color of cottonseed oil in the tests conducted is indicated in some data distributed at the meeting: The following were obtained for three samples of cottonseed oil:

	I	II	III
Color of crude	35/7.1	35/6.1	35/10.6
Color as made (overheads)	37/7.2	35/6.7	50/9.2
Color refined (overheads)	33/3.3	35/5.4	35/6.1

Other data, indicating operating conditions, analysis of crude soybean oil and cottonseed oil; and the analysis of the overheads were presented also.

Hooker Shifts at Tacoma

The appointment of Thomas E. Moffitt as works manager of the Tacoma, Wash., plant of Hooker Electrochemical Co., Niagara Falls, N. Y., was announced recently. He succeeds John D. Rue, who has retired under the company's pension plan. Other promotions at the Tacoma plant include the naming of George Gentes to plant engineer, succeeding Howard D. Norris, retired. Edwin A. Adams has been named purchasing agent, Chester D. Roberts becomes traffic manager, succeeding Carl A. Stewart, retired, and Russell Hansen is the new master mechanic, replacing Andrew K. Hansen, who has retired.

Mr. Moffitt, a graduate of Cornell University has been with Hooker at Tacoma since Sept., 1950, as assistant works manager. From 1930 until 1945 he had been associated with the company in various capacities in sales and sales service, also as acting sales manager and assistant sales manager.

Oil Citronella Ceylon II Imitation 3654

Especially effective for perfuming household and floating soaps, insecticides, fly sprays and similar products.



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Evaluation of Newer Detergents

HOUSEHOLD laundering detergents cannot be evaluated for over-all soil removal from practical soiled fabrics, when a single type of soiled cloth is employed, according to J. A. Woodhead and H. Paitchel, Colgate-Palmolive-Peet Co., Jersey City, N. J., in a report on "Some Inadequacies of the Soiled Cloth Detergency Test" presented at the 12th International Congress of Pure and Applied Chemistry, held in New York, September 10 to 13. The Congress was part of the World Chemical Conclave, which included also the Diamond Jubilee meeting of the American Chemical Society, and the Sixteenth Conference of the International Union of Pure and Applied Chemistry.

In further discussion of soiled cloth detergency tests, J. A. Woodhead indicated that when measuring the ability of detergents to remove specific soils from a fabric, the same ratio of cloth to water as encountered in actual conditions should be used. Furthermore, that soil-removal tests based on wool test fabric cannot be correlated with washing performance of a given soap or detergent on cotton fabric.

"An Improved Apparatus for the Study of Foams" was described by Cheves Walling, Lever Brothers Co., New York, in which foam properties such as drainage rates and ultimate stability are studied on the basis of the nature and amount of surface-active material concentrated in the film surfaces.

H. K. Sturm, Friedrich Steinfels, AG, Zurich, Switzerland discussed "Some Aspects of New Quaternary Ammonium Compounds with Bactericidal Properties," pointing out that some of these salts may be used in the manufacture of disinfecting soaps and as surgical sterilizing agents. The crystalline quaternary ammonium salts are prepared by reacting triethanolamine ethers, which are obtained by action of alkyl bromides on monosodium triethanolamine in dioxane solution.

A new approach to interpretation

of reflectance as a measure of soil in cotton fabric was presented by Irving Reich, Foster D. Snell, Inc., New York. The studies were based on the actual amount of non-reflecting soil present in the fabric, and suggested that soil particles are deposited preferentially on other particles, so that soiling increases mainly by growth of a limited number of soil aggregates, rather than by independent deposition of particles. After washing, it is theorized that soil is removed mainly by detachment of complete aggregates, rather than by reversal of the original flocculation process.

Among the other reports presented at the Fats, Soaps, Detergents Section of the Congress, was a study on "Urea Complexes of Fatty Acid Derivatives" by E. Marshall Meade of the University of Manchester, England, and "The Selectivity of the Formation of Urea Adducts of Fatty Acids" by L. H. Dunlap of Armstrong Cork Co., Lancaster, Pa.

Bruno Court Merger

Maurice G. Couderchet, sales manager for Bruno Court, S. A. of Grasse, France, who was in the U. S.

recently visiting the firm's representative, Naugatuck Aromatics Division of United States Rubber Co., New York, announced the merger of his company with the firm of Jean Roure, Pierre Ziller & Cie. and the creation of a new company to be known as Jean Roure, Pierre Ziller, Bruno Court & Cie.

The new firm has at its disposal the technical organizations of the two former companies, plus up-to-date production facilities. Naugatuck continues to represent the new company.

John A. Schake Dies

John A. Schake, 81, who promoted soap products into millions of American kitchens during a lifetime of sales managerships, died Sept. 18, in Rochester, N. Y., General Hospital. Early in life he became sales manager for the territory west of the Mississippi for a soap product. Then he joined the William Waltke Co. in St. Louis, where he developed the sales strategy for "Oxydol" and "Lava" soap, two products eventually sold to Procter & Gamble Co., Cincinnati. He retired at 60, but nine months later joined Lambert Pharmacal Co., St. Louis, as sales manager, a post he held until four years ago.

One of 32 gift sets designed by Yardley of London, Inc., New York, for 1951 Christmas selling. This is the largest and most versatile line ever offered by the firm. A national color advertising campaign will promote the holiday line. Set at right includes three cakes of lavender soap, a box of dusting powder and toilet water. Packaging is gift box covered with imported English paper in a decorative pattern of pastel-colored spruce branches against white and gold background. Box covers are lined in gold and white.





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Established 1838

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Shave Products

(From Page 57)

soaps except that more experience is generally required. The ability to make a good, mild shaving soap has long been considered the mark of a first rate soaper. Day, (29) however, is of the opinion that it is as easy to turn out a batch of superior shaving soap as it is to make any other type of superior soap. The use of the right ingredients and modern equipment, plus the desire to make a good product, says he, will usually result in a creditable commodity.

The old fashioned mug, with its flat cake of shaving soap has been largely supplanted by the more elegant shaving bowl of ceramic, wood or plastic. The soap itself is generally premolded to fit these modern containers. In some cases replacement cakes are available, thus putting these products in a better competitive position. As remarked by Reilly, (3) the introduction of these attractive packages has resulted in a marked impetus in the sale of the soap-filled shaving bowls. At first they were sold as part of a unit or set, along with other shaving aids, but today the shaving bowl is doing fairly well on its own.

Although rather complex combinations can be used, simple mixtures and careful production methods will yield soaps that are satisfactory for shaving cakes and the modern "mug." Vallance, (30) for example, gives the following as a typical formula for a semi-boiled shaving soap:

	parts
Stearic acid, double pressed...	56
Coconut oil, Cochinchina grade...	10
Caustic potash lye, 41° Be...	24
Caustic soda lye, 36° Be...	10

The coconut oil is saponified with the soda lye and allowed to stand for a couple of hours, after which the stearic acid and then the potash lye are added. Mixing or crutching is essential until the whole mass is uniform; showing no streaks. Testing for alkali and superfatting are done in the usual manner. For use in wooden shaving bowls, the soap may be filled directly into the containers, while in a fluid

condition, or run off into suitable molds.

A somewhat modified procedure is given by Thomssen (13) who presents the following formula for a mug shaving soap:

	parts
Tallow, bleached extra	270
Coconut oil, Cochinchina grade...	162
Stearic acid, double pressed	312
Soda lye, 40° Be.	48
Potash lye, 38° Be.	108

After saponification the finished soap is chipped. When dried to a moisture content of 15 per cent it is blended with the perfume and, if a whiter appearance is desired, about 0.3 per cent of titanium dioxide is mixed in. It is then milled, plodded and pressed into suitably shaped cakes.

Thomssen stresses the importance of preparing the shaving cakes so that they will fit snugly into the containers without undue shrinkage. He points out that, in addition to the milling and plodding of the dried soap, some manufacturers take the precaution of holding the molded cakes on trays for several weeks before putting them into the bowls. The use of moisture-proof wrappings will help to prevent shrinkage and keep the soap at its correct moisture content.

In cases where the mugs are filled direct, Day (29) advises that the soap must be poured while it is rather hot. It should at least be fully fluid. He suggests that a little more glycerine than usual should be added to the crutcher, as well as a little more perfume. Pertinent in this connection is the observation (31) that pouring a hot soap mass into the bowl is not the best procedure because it tends to shrink away from the container on cooling.

Shaving Sticks

As indicated in Reilly's (3) report, shaving sticks do not hold a prominent place among shaving preparations. Indeed, some producers have discontinued their manufacture but several familiar brands are still to be found on store shelves. According to one authority (32), a soap for shaving sticks should be mild, super-fatted, preferably white in color, and hold its shape without shrinking or warping. These properties can be met by a

potash soap base made from stearic acid and coconut oil to which a sufficient quantity of glycerine has been added as an emollient. A soap of this sort can be made along the following lines:

	pounds
Stearic acid, double pressed	1050
Coconut oil, Cochinchina grade...	300
Potash lye, 50° Be.	550
Soda lye, 45° Be.	40
Glycerine	100

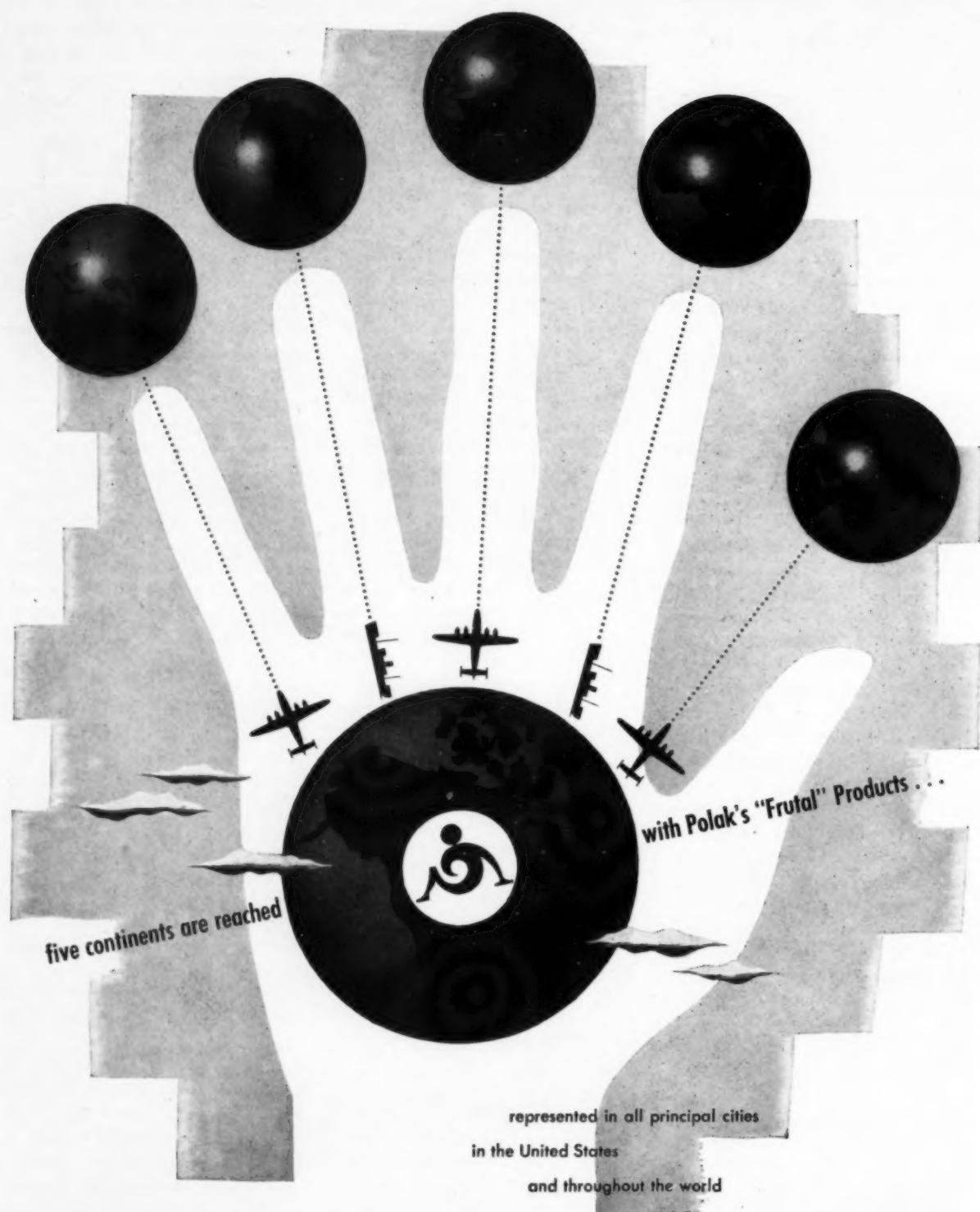
The coconut oil, glycerine and soda lye are mixed together in a crutcher after which 100 pounds of potash lye are added to complete the saponification of the oil. The rest of the potash lye is then run in. With the crutcher in motion, first at low speed, later at higher speeds, the previously melted stearic acid is run into the mixer in a slow steady stream. After this addition, mix the soap for about half an hour. Following suitable tests and adjustments, the soap is given the desired finish and it is dropped into a frame in which it is permitted to cool completely. It is then slabbed, chipped and dried carefully to a 15 per cent moisture content. The soap base is then milled with the addition of about six ounces of titanium dioxide per 100 pounds of base and a suitable quantity of perfume. The shaving soap is finished in the usual manner by plodding, shaping and cutting, after which it is packaged as desired.

Shaving Powders

FEW self-shavers use shaving powders but certain barbers still prefer such a product because of the sanitary way in which it is dispensed. One reason for this lack of popularity with the general public is the tendency for shaving powders to absorb moisture and become lumpy and clog the sprinkler openings. To combat these disadvantages, the soap should be dried to below three per cent moisture content. The addition of about five per cent of talc or other inert mineral will help to prevent caking and also serve as a carrier for the perfume. (13)

Many shaving soaps consist of mixtures of powdered toilet soap and powdered shaving soap. One well-rec-

(Turn to Page 106)



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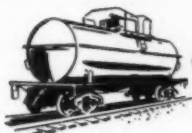
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Misc. P.O. Supply Bids

Low bids in recent openings for miscellaneous supplies by the Post Office Department, Washington, D. C., were submitted by the following: 75 gallons of bronze cleaner, Cole Laboratories, Long Island City, N. Y.; \$2.98; 70,000 pounds of toilet soap, Procter & Gamble Distributing Co., Cincinnati, 11.76 cents; 750 gallons of metal polish, Bon Ami Co., New York, 23.66 a pint, alternate for 6,000 pints; 750 gallons of furniture polish, Trio Chemical Works, Brooklyn, 57 cents.

F.S.S. Soap Bids

Bids on an unspecified quantity of soap in a recent opening for miscellaneous supplies by the Federal Supply Service, New York, were received from:

Bon Ami Co., New York, item 2, 8.33c (9½-oz.);
Swift & Co., New York, item 1, \$5.62 (4¼-oz.);
M. Schneider & Sons, Brooklyn, item 1, \$4; 2, 3.75c;
Murro Chem. Co., New York, item 1, \$4;
Unity Sanitary Supply Co., New York, item 1, \$6.75; 2, 7c;
Hewitt Soap Co., Dayton, item 1, \$6;
N. Brittingham & Sons, Phila., item 1, \$6.06 (4¼-oz.), alt. \$7.09 (5-oz.);
Met-Chem. Industries, New York, item 1, \$5.18 (4¼-oz.); 2, 6c; all or none;
Brillo Mfg. Co., Brooklyn, item 1, \$3.90;
Procter & Gamble, Cincinnati, item 1, \$5.08 exception;
Day & Frick, Phila., item 2, 4.2c;
Crystal Soap & Chem. Co., Phila., item 1, \$4.58; 2, 3.96c;
Colgate-Palmolive-Peet Co., Jersey City, N. J., item 1, \$3.18; prompt del.

Dishwashing Comp. Bids

The following bids were received on 52,000 pounds of dishwashing compound in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C.:
Clarkson Laboratories, Philadelphia, item 1, 8.28 cents a pound, 8.85 cents if awarded, to be delivered separately from item 2; item 2, 8.25 cents; Economics Laboratories, Inc., St. Paul, item 1, 10 cents, 2, 9.1 cents; Washington Chemical Sales, Washington,

D. C., item 1, 8.5 cents, 2, 8.15 cents; National Milling & Chemical Co., Philadelphia, item 1, 9.67 cents; Du-Rite Chemical Co., Brentwood, Md., 10.5 cents; National Cleanser Products Co., New York, 10.8 cents.

Low Soap, Wax Bids

Kem Products Corp., Brooklyn, submitted the low bid, 55 cents, in a recent opening by the Post Office Department, Washington, D. C., for 5,000 gallons of floor wax.

In another Post Office Department opening on automobile soap low bids were submitted by: National Chemical Laboratory of Pennsylvania, Philadelphia, item 1, 8.1 cents; item 3, 7.2 cents; E. F. Drew & Co., New York, 7.7 cents; General Soap Co., Chicago, item 4, 7 cents.

Pyrethrum Conc. Award

City Chemical Corp., received the award on a quantity of pyrethrum concentrate with a bid of \$1,380.60 in a recent opening for miscellaneous supplies by the Public Buildings Service, Washington, D. C.

AQM Soap Bids

In a recent opening for miscellaneous supplies by the Army Quartermaster New York Office the following bids were received on 19,000,000 bars of soap for a.) Schenectady; b. Sharpe; c. Auburn; d. Atlanta; e. Belle Meade; item 1, fob point of origin, 2, fob destination:

Mt. Hood Soap Co., Portland, Oreg., item 1, 8.35c exp. & 7.7c dom.; 2c, 8.7c exp.; 2g, 8.97c dom.
National Soap & Chemical Co., Tacoma, Wash., item 1, 7.67c exp. & 7.17c dom.; 2c, 7.87c exp.; 2g, 8.52c dom.
North Coast Chem. & Soap Wks., Seattle, Wash., item 2c, 7.89c.
Pioneer Soap Co., San Francisco, item 1, 6.79c exp. & 6.59c dom.; 2b, 7.03c exp.; 2g, 7.53c dom.
Armour & Co., Chicago, item 1, 7.74c fob Chicago & 7.28c fob Babbitt, exp. pkg. and 7.03c fob Chicago & 7.6c fob Babbitt, domestic pkg.; 2a, 7.75c; b, 9.77c; c, 9.77c; d, 8.9c; e, 7.56c; f, 7.16c (a thru f, export pkg.); 2g, 8.87c; h, 7.63c; i, 8.11c; j, 7.35c; k, 6.98c; (g thru k, dom. pkg.).
Fels & Co., Phila., item 1, 7.49c exp. & 7.26c dom.; 2a, 8.04c; b, 9.83c;

c, 9.83c; d, 8.55c; e, 7.82c (2a thru e, exp.); 2f, 7.8c; g, 9.56c; h, 8.02; i, 8.3c; j, 7.8c; k, 7.58c (2f thru k, dom.).

Fitzpatrick Bros., Chicago, 1%, Oct. del., item 1, 6.27c dom.; 2g, 6.75c dom.; Nov. del., item 1, 6.6c dom.; 2g, 7.12c dom.; Dec. del., item 1, 6.71c dom.; 2g, 7.2c dom.; Jan. del., item 1, 6.97c dom.; 2g, 7.45c dom.

Standard Supply Co., Camden, N. J., item 1, 8.53c dom.; 2k, 8.78c dom.
Colgate-Palmolive-Peet Co., Jersey City, N. J., item 1, 6c exp. & 5.417c dom.; 2a, 6.39c; b, 6.17c; 7.02c; d, 6.8c; e, 6.25c (2a thru e, export); 2f, 5.807c; g, 6.467c; h, 5.867c; i, 6.217c; j, 5.897c; k, 5.667c (2f thru k, domestic).

Procter & Gamble Co., Cincinnati, delivered dest., item 2a, 8.372c exp.; b, 8.968c exp.; f, 8.815c dom.; g, 9.143c dom.; k, 8.68c dom.; fob origin, item 2a, 7.83c exp.; b, 8.635c exp.; f, 8.347c dom.; g, 8.175c dom.; k, 8.347c dom.

Tennessee Soap Co., Memphis, Tenn., item 1, 7.3c exp. & 6.87c dom.; 2d, 8.035c exp.; 2i, 7.605c dom.

Swift & Co., N. Y. City (all dom.), item 1, 6.68c; 2f, 7.15c; g, 8.9c; h, 7.58c; i, 7.8c; j, 7.43c; k, 7.22c.

Gillam Soap Works, Ft. Worth, Tex., item 1, 6.9c exp. & 6.5c dom.; 2a, 8.84c; b, 8.66c; c, 8.66c; d, 8.5c; e, 8.86c (2a thru e, exp.); 2f, 8.44c; g, 8.26c; h, 8c; i, 8c; j, 8.37c; k, 8.5c (2f thru k, dom.).

Newell-Gutradt Co., San Francisco, item 1, 7.97c exp. & 7.25c dom.; 2b, 8.33c exp.; 2c, 9.23c exp.; 2g, 8.36c dom.

J. Evanson & Sons, Camden, N. J., item 1, 7.2c dom.; 2f, 7.739c; g, 9.493c; h, 7.963c; i, 8.237c; j, 7.773c; k, 7.529c (all dom.).

Spazier Soap & Chem. Co., Santa Monica, Calif., item 1, 14c dom.

Yanco, Inc., Phila., item 1, 8.4c exp. & 7.9c dom.; 2a, 8.9392c; b, 10.6923c; c, 10.6923c; d, 9.437c; e, 8.6835c (a thru e, exp.); 2f, 8.439; g, 10.1923c; h, 8.6624c; i, 9.27c; j, 8.43c; k, 8.35c (2f thru k, dom.).

Lieber Bros. Co., New York, item 1, 6.49c exp. & 6.13c dom.; 2a, 6.98; b, 8.98c; c, 8.98c; d, 7.75c; e, 7.13c (2a thru e, exp.); 2f, 6.62c; g, 8.62c; h, 7.14c; i, 7.39c; j, 7.02c; k, 6.77c (2f thru k, dom.).

Murro Chem. Co., New York, 2%, item 2i, 9.5c dom.

Kamen Soap Prods. Co., New York, item 1, 8.59c exp. & 9.97c exp., and 8.89c dom. & 10.27c dom.

Haskins Bros., Omaha, Neb., item 1, 7c exp. & 6.4c dom.; 2a, 8.35c; b, 8.79; c, 8.76c; d, 8.41c; e, 8.43c (2a thru e, exp.); 2f, 7.75c; g, 7.9c; h, 7.43c; i, 7.81c; j, 7.77c; k, 7.83c (2f thru k, dom.).

No. 2,562,488. Germicidal Reaction Products of Silver Salts and Monohydroxy-Monoamino Alkanes, patented by Walter M. Fuchs, New York, N. Y., assignor, by mesne assignments, to Bactericidal Research, Inc., New York, N. Y., a corporation of New York. Described by the patent is the method for forming a germicidal composition which comprises mixing a silver salt and a substantially anhydrous monohydroxy-monoamino-alkane to form a substantially homogeneous liquid and maintaining the temperature of the liquid at from about 10 to about 50 degrees centigrade for at least five minutes.

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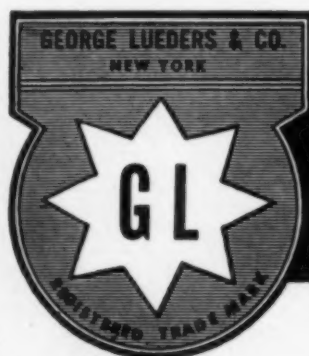
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THE following trade marks are published in compliance with section 13 (a) of the Trade Mark Act of 1946. Notice of opposition must be filed within 30 days of publication and a fee of \$25 must accompany each notice of opposition.

Swank — This for automobile spray wax. Filed June 28, 1950 by Bostwick Laboratories, also doing business as Swank Products Co., Bridgeport, Conn. Claims use since Dec. 15, 1949.

Scat — This for insecticide. Filed June 3, 1948 by Knox Products Co., St. Petersburg, Fla. Claims use since June 20, 1931.

Steritabs — This for sanitizing preparation. Filed Oct. 12, 1949 by Infancy Products Co., Norwich, N. Y. Claims use since May 3, 1949.

Socci — This for fungicidal material. Filed Oct. 31, 1949 by Scientific Oil Compounding Co., Chicago. Claims use since Jan. 3, 1949.

Kapa-San — This for urinal deodorizer. Filed Aug. 30, 1949 by Hy-san Products Co., Chicago. Claims use since Aug. 1934.

Novak's Solution — This for antiseptic solution. Filed Mar. 2, 1950 by Ulmer Pharmacal Co., Minneapolis. Claims use since June 1, 1940.

Bentec — This for laundry washing compound. Filed Nov. 5, 1949 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since Sept. 3, 1948.

Kromet — This for cleaning and washing composition having sanitizing properties. Filed Nov. 5, 1949 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since Sept. 21, 1948.

Baltec — This for washing and cleaning composition particularly adapted for use in railroading. Filed Nov. 5, 1949 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since July 11, 1949.

Maze-U Two-Way — This for soap in paste form. Filed July 18, 1950 by Dewike Laboratory, Toledo, O. Claims use since June, 1949.

Aramite — This for chemicals to control or destroy mites. Filed Nov. 10, 1949 by United States Rubber Co., New York. Claims use since Oct. 20, 1949.

Sterisoft — This for sterilizing and softening agent to be added to the final rinse in the laundering of cotton materials. Filed Mar. 27, 1950 by Joseph D. Payne, Glendale, Calif. Claims use since Mar. 14, 1950.

Barret — This for insecticides, household and industrial germicides.

Filed Aug. 29, 1950 by Allied Chemical & Dye Corp., New York. Claims use since 1949.

Black Gold — This for roach powder. Filed Sept. 18, 1950 by E. A. Miller Exterminating Co., Nashville, Tenn. Claims use since Sept. 14, 1950.

Control 56 — This for insecticides. Filed Sept. 20, 1950 by Scientific Supply Co., Denver, Colo. Claims use since Apr. 27, 1950.

2-4-Dex — This for liquefied concentrate for killing weeds. Filed Nov. 4, 1950 by Twin City Seed Co., Minneapolis. Claims use since May 1, 1950.

Varick — This for disinfectant. Filed Nov. 14, 1950 by Francis H. Leggett & Co., New York. Claims use since 1902.

Cellu-san — This for economic poisons wood preservative. Filed Mar. 16, 1951 by Fungitrol Chemicals, Inc., Hillside, N. J. Claims use since Mar. 23, 1950.

Diaperwite — This for detergent compound for laundering baby clothes. Filed July 25, 1950 by Diaperwite, Inc., New York. Claims use since Sept. 28, 1943.

Lustre Glint — This for shampoos. Filed Feb. 12, 1949 by Golden Glint Co., Seattle, Wash. Claims use since June 30, 1937.

Eternol — This for shampoo tints. Filed Apr. 12, 1949 by Eterne Manufacturing Corp., New York. Claims use since May 31, 1934.

Duolia — This for dentifrices. Filed Nov. 7, 1950 by Huenelator Corp., Beverly Hills, Calif. Claims use since Aug. 1, 1950.

Radinite — This for furniture polish and cleaner. Filed June 13, 1949 by Radinite Corp., New York. Claims use since Aug. 20, 1948.

Karseal — This for automobile body polish. Filed Dec. 17, 1949 by Karseal Corp., Los Angeles. Claims use since Apr. 16, 1948.

Pentol — This for disinfectant. Filed Aug. 22, 1949 by Horton & Converse, Los Angeles. Claims use since Nov. 12, 1941.

Cleenx — This for pine oil liquid disinfectant. Filed Oct. 13, 1949 by Cleenx Co., Alexandria, La. Claims use since Sept. 1, 1949.

McBride's — This for disinfectant and exterminator. Filed May 31, 1950 by McBride's, Methuen, Mass. Claims use since Apr. 1, 1940.

Tri-Excel — This for insecticidal dust concentrate. Filed July 28, 1950 by S. B. Penick & Co., New York. Claims use since Jan. 9, 1950.

Sofair — This for liquid shaving cream. Filed Sept. 13, 1950 by Chap Stick Co., Lynchburg, Va. Claims

use since May 25, 1950.

Hypodyne — This for synthetic detergents. Filed Jan. 19, 1950 by Ferro Chemical Corp., Bedford, O. Claims use since Sept. 30, 1949.

Plyon — This for water or waterless hand cleaning preparation. Filed Dec. 12, 1950 by Goodenow-Morley Co., Oklahoma City. Claims use since May 1, 1950.

Lincide — This for insecticides. Filed Aug. 8, 1950 by Thompson Horticultural Chemicals Corp., Los Angeles. Claims use since May 5, 1950.

Spud — This for insecticide. Filed Dec. 7, 1950 by Geigy Co., New York. Claims use since Apr. 27, 1948.

Hydroaxated — This for floor wax. Filed Oct. 30, 1950 by Chemical Service of Baltimore, Baltimore. Claims use since Sept. 15, 1950.

Kaywoodie — This for shaving cream. Filed Jan. 18, 1931 by Associated Products, Inc., Chicago. Claims use since Nov. 17, 1950.

Fashion — This for toilet soap. Filed Mar. 9, 1948 by Hewitt Soap Co., Dayton, O. Claims use since Oct. 12, 1938.

"Dysept" — This for antiseptic liquid soaps. Filed Dec. 8, 1949 by Davies-Young Soap Co., Dayton, O. Claims use since Nov. 15, 1949.

Alrolene — This for detergent for use with solvents for particular use in dry cleaning. Filed Jan. 20, 1950 by Alrose Chemical Co., Cranston, Providence, R. I. Claims use since Oct. 24, 1949.

Bi-Kleen — This for detergent for general household use. Filed July 17, 1950 by Auto Chlor System, Inc., Memphis. Claims use since June 26, 1950.

Hopalong Cassidy — This for soap. Filed Nov. 9, 1950 by William Boyd, Beverly Hills, Calif. Claims use since Jan. 15, 1950.

Super-Brite — This for bowling alley cleaner and polish. Filed Sept. 16, 1948 by Brunswick-Balke-Collender Co., Chicago. Claims use since Apr. 20, 1942.

Perfecticide — This for filled insecticide dispenser in the nature of valved pressure containers. Filed July 21, 1949 by Casco Products Corp., Bridgeport, Conn. Claims use since July 13, 1949.

Dilan — This for chemical toxicants use in the manufacture and formulation of insecticides. Filed Nov. 30, 1949 by Commercial Solvents Corp., New York. Claims use since Oct., 1949.

Warlasco — This for insecticides. Filed Jan. 12, 1950 by Warren-Douglas Chemical Co., Omaha, Nebr. Claims use since Mar. 15, 1946.

Corona — This for insecticides. Filed Mar. 28, 1950 by Pittsburgh Plate Glass Co., Pittsburgh. Claims use since Oct. 4, 1912.

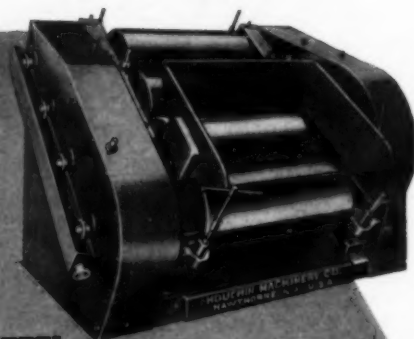
Magik-Rid — This for insecticides. Filed Apr. 10, 1950 by Knapp-

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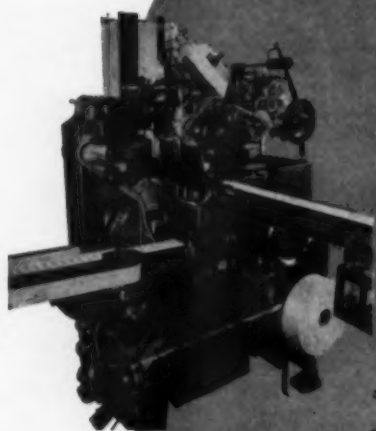
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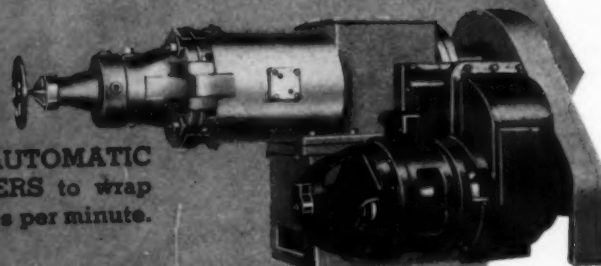
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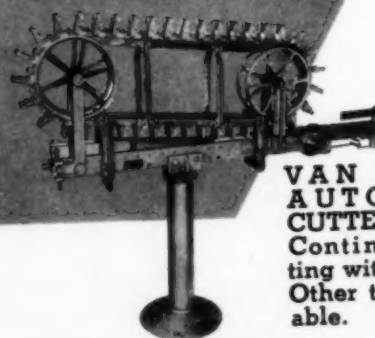
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Manufacturers of Soap Making Machinery for over Three-Quarters of a Century

Detergents for Shampoos

ALTHOUGH a number of detergents produce rich lather, they are not always adaptable to the formulation of shampoos, since they may have poor resistance to hard water, poor solubility in water, or a disagreeable odor. Other detergents are disqualified because of a harsh effect on hair and skin. Detergents including the amide group have been found to produce good shampoos. One such group of products are the fatty alkylolamides. These products are miscible with water, and form clear aqueous solutions at concentrations above two per cent.

The fatty alkylolamides are obtained by condensing the mixed fatty acids of coconut oil with two equivalents of diethanolamine or other alkylolamine. The product consists of mixed fatty amides, having the general formula $RCON(C_2H_4OH)_2$, plus amine soaps and an excess of diethanolamine. Commercial products of this nature are sold as "Alrosol" (1), "Ninol" (2), and "Emcol 5100" (3).

"Alrosol C" is known to produce good lather, although the fatty alkylolamides, as a general rule, do not have sufficient foaming action to make good shampoos. They are used mainly as thickeners in liquid and paste shampoos, having the added advantage of contributing to the cleansing action of the product. Some of the fatty alkylolamides pass through a gel stage on dilution, while others show little variation in viscosity over a wide range of concentrations. The latter type product is readily applicable in

Detergents found to produce good shampoos include the fatty alkylolamides. They are miscible with water and form clear aqueous solutions above two percent. Lather does not always mean product good for shampoo.

making shampoo concentrates which retain their original viscosity when diluted.

The fatty alkylolamides are compatible with soap and sulfated detergents. A satisfactory shampoo product can be made by combining "Alrosol C" or "Ninol" with the alkyl aryl sulfonates.

Sulfated alkylolamides have good lathering properties even in hard water, and form good shampoo products. Some of the commercial products, however, have poor foaming properties, because of the presence of unsulfated material. The sodium salt of this group of compounds has the following general formula $RCONH(C_2H_4OSO_3Na)$. It is based on sulfating the monoethanolamide of coconut fatty acids. The sodium salts are particularly suitable for making paste shampoo products. One patented product has the following formula:

	parts
sulfated lauric acid amide of monoethanolamine (sodium salt)	4.0
sulfated lauric acid amide of isopropanolamine (sodium salt)	8.0
disodium hydrogen phosphate	1.0
sodium chloride	9.7
lauric acid amide of monoethanolamine	3.3
"Snodotte" acid	4.04
water	68.4
preservative and perfume....	q.s.

The "Snodotte" acid is a mix-

ture of stearic, arachidic and behenic acids.

Another group of amide detergents having properties favorable to the formulation of shampoos are the sulfosuccinamic acid derivatives.

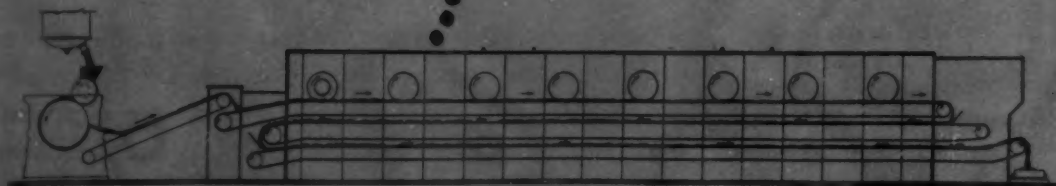
One such commercial product is "Aerosol 18" (4), which is the disodium salt of N-octadecyl sulfosuccinamic acid. It is sold as a 35 per cent aqueous paste, and is easily made into shampoo pastes. It does not, however, form clear solutions in water. Another product in this same class is "Aerosol 22," which has high water solubility but poorer foaming than "Aerosol 18" at dilute solutions. At concentrations above two per cent, "Aerosol 22" makes a satisfactory shampoo. The ethanolamine salts of sulfosuccinamic acid have high water solubility and good foaming. A dilute solution containing from .1 to two per cent of the detergent is adequate as a shampoo, and may be thickened by means of methyl cellulose. It is recommended that a salt of n-octyl sulfate or of 2-ethylhexyl sulfoacetate be added also.

The oleyl sodium methyl taurate sulfonated amide detergents such as oleyl sodium methyl taurate ("Antaron L135" (5) and "Arctic Syntex

1. Alrose Chemical Co., Providence, R. I.
2. Ninol Laboratories, Inc., Chicago.
3. Emulsol Corp., Chicago.

4. American Cyanamid Co., New York.
5. Antara Products, General Dyestuff Corp., New York.

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as bars, flakes or powder
- process many different formulae and
a wide range of moisture content

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Have you patented equipment which you have developed for your own line of business that you would care to have developed, manufactured, or sold?

If such equipment comes within the line of our manufacturing and selling experience, we would be pleased to have you contact us. We will discuss the matter with you without obligation. If there seems to be a mutual advantage we may be able to realize good returns on new developments.

T") (6) are prepared by condensing oleic acid chloride with methyl taurine in alkaline solution. This type of detergent has limited solubility so that formulation in liquid shampoos is somewhat difficult. For example, one powder detergent in this class yields cloudy solutions at concentrations above two per cent, and forms a gel at a concentration of 10 per cent. It is recommended as a lime soap disperser in soap shampoos.

A French patent (953,945) describes a method for making fluid shampoo concentrates with the sul-

fated amides, by incorporating butyl carbitol to prevent gelling. It is also suggested that a sequestering agent be included to keep the product from becoming cloudy on dilution. A concentrate based on the above recommendations is diluted in the proportion of 15 parts to 8,000 parts of water, in practical application.

A whole series of detergents having different properties may be prepared by substituting different fatty acids or different amine components in various detergent formulations. *Schimmel Briefs* No. 197, August (1951).

Use of Tracers in Cleaning Study

ONE of the most apparent advantages in using radio-active tracers in the study of metal cleaning problems is the extreme sensitivity of the method. However, one of the difficulties encountered in metal studies is that of preparing a suitable tagged soil. It is necessary that the physical and chemical properties of the added radioactive materials be the same as those of the soil, to avoid the complication of cleaning results. Radioactive stearic acid, tagged with carbon 14, was found to be readily available, and thus investigated as a soil.

The studies with stearic acid have been limited, so far, to steel test pieces, cleaning at a single temperature, with single-component solutions. A polishing machine is used to prepare the surface of the test plates, removing the original surface of the samples. This surface is removed to avoid effects due to variations in the original surface, such as soil trapped in the worked surface, and residual soil films that might not be removed by simple cleaning procedures. After a standardized polishing and cleaning process, the plates are dried and subjected to soiling. The soil is applied by a soil spreading apparatus, which operates by traversing a micro-pipette containing the soil solution from the center of the test disc to the edge, while the disc rotates. A highly purified kerosene has been found satisfac-

tory as the solvent for the soil. The coated discs are then dried under an infra red lamp.

The cleaning procedure consisted simply of immersing the soiled disc for a measured time, without agitation, in a fixed volume of cleaning solution, held at a constant temperature of 90° C., and then rinsing at room temperature.

In a series of tests using sodium metasilicate, soda ash, trisodium phosphate and tetra sodium pyrophosphate as the cleaning agents, at alkali concentration calculated to give one per cent sodium oxide in solution, and varying the cleaning time, very distinct differences in cleaning action were observed, particularly at short cleaning periods. Soil removal tests after one minute of cleaning, rated the cleaners in the following decreasing order of effectiveness: tetra sodium pyrophosphate, sodium metasilicate, trisodium phosphate and sodium carbonate. The cleaning rate decreased with time, each cleaning solution apparently reaching an equilibrium value, in terms of residual soil. All of the solutions reached this equilibrium value within 10 minutes, and continued cleaning had little or no effect. After six minutes, the order of effective cleaning was as follows: tetra sodium pyrophosphate, trisodium phosphate, sodium carbonate, and sodium metasilicate.

It often has been assumed that removal of a fatty acid soil would de-

pend largely on saponification, and that, therefore, the more strongly alkaline, or the higher the pH of a cleaner, the more effective it should be. Results of this study directly contradict this assumption, as the alkali with the lowest pH gave the best results.

In a comparison of soil removal by a strong alkali (sodium hydroxide) and organic detergent (Kreelon), the synthetic detergent was found to remove more soil with cleaning times in excess of six minutes. At short cleaning periods (up to six minutes), the alkali was more effective in removing soil.

A series of tests in which the cleaning time was kept constant, (at two minutes), and the concentration of solution varied, indicated that variations in alkali concentrations over the range of .1 to one per cent sodium oxide had no appreciable effect on cleaning results, but that increase in concentration above one per cent sodium oxide caused a rapid loss of cleaning efficiency. The fact that all four alkalies showed a break at about the same point, i.e., about one per cent Na₂O, seems to indicate that available sodium oxide concentration rather than molar concentration is the controlling factor. J. W. Hensley, H. A. Skinner, H. R. Suter abstract of report presented at the A.S.T.M. Committee D-12 Meeting, March 19-20, 1951.

Lead Content of Toothpaste

Toothpaste squeezed out of a tube has ten times less lead than a sample scraped off the inside of a tube after cutting it open. Lead determinations vary from .16 mg. per cent to 72 mg. per cent; 5 mg. per cent being the permissible content. In the lead analysis, the sample is dried at 550°-600°, and dissolved in ten per cent nitric acid. Tin is precipitated in this operation, and filtered off. Lead is determined in the filtrate by using the colorimetric dithiozone method. Interference of other heavy metals is prevented by the addition of citric acid and potassium cyanide. *Roczniki i Panstwowego Zakladu Hig.* 1, 191-6, (1950).

6. Colgate-Palmolive-Peet Co., Jersey City, N. J.

MAXIMUM MECHANIZATION

*is inflation's
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ONE of the principal weapons of the manufacturer in combating inflation is an increase in his own production. To obtain this increase in the face of the manpower shortage, calls for maximum mechanization of manufacturing processes.

Much machinery in use today is badly out of date and should be replaced. A considerable amount of equipment, also, while not obsolete in design, is badly in need of a factory reconditioning job.

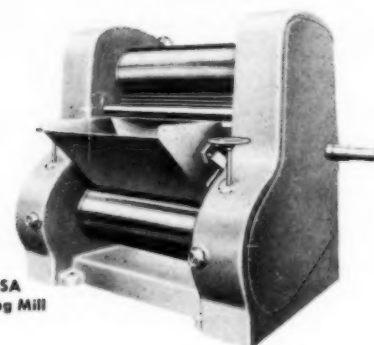
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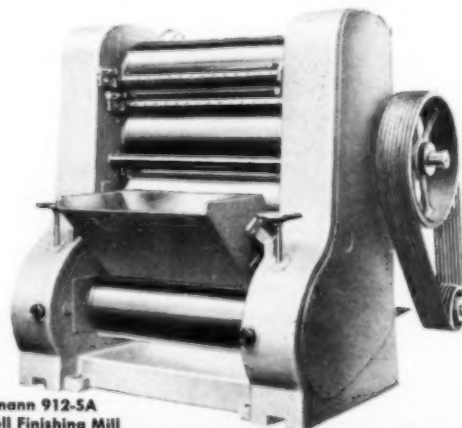
Lehmann 924-SA
Four Roll Roughing Mill



Lehmann 310-P
Preliminary Plodder



Lehmann 310-F
Finishing Plodder



Lehmann 912-SA
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Bleaching of Oils

In bleaching oils with activated earths, according to one line of thought on the optimum conditions of oil bleaching, practically complete removal of water is considered advisable. This theory is based on the contention that a large proportion of earth is otherwise used up in absorbing moisture. Some oil refiners have been accustomed to vacuum drying the oil between the neutralization of the free fatty acids with caustic soda and the earth bleaching. Other refiners have found that in practice, a certain moisture content can make a considerable improvement in the color of the treated oil.

According to the Fullers' Earth Union, the presence of some moisture in the oil when the earth is added, is in many cases an advantage: the moisture content of the oil should not normally be higher than that which will amount to six per cent, calculated on the weight of earth to be used. The moisture in the earth will be additional to this. The total moisture, calculated on the earth, in normal climates will be 12 to 15 per cent. C. Morel, *Soap, Perfumery & Cosmetics* 24, No. 9, 889-892 (1951).

Soaps in Salt Solution

The fact that soap micelles increase in size upon addition of salt is related to the ionic strength of the solution for the limited case of micelle surfaces of low charge density. This theory also predicts unlimited size of the micelle at a predetermined ionic strength. In this theory, the cohesive forces appear as a coefficient of the Debye Huckle K ; therefore, systems with long hydrocarbon chains may be expected to have a limited range of stability. Three other important features of the soap micelle system are: (1) the magnitude of the critical concentration, C_c , (2) the change of C_c with added salt, and (3) the fact that only the gegen ion is of importance in the behavior of the micelle. These three factors are semi-quantitatively accounted for by a theory that was modified to include the case of a micelle end surface of high charge

density. M. E. Hobbs, *J. Physical and Colloid Chem.* 55, No. 5, 675-683 (1951).

Non-Ionics in Salt Soln.

Studies of the behavior of non-ionic surface active agents in salt solutions indicate that sodium chloride and other salts of alkali metals will salt-out the surfactants, whereas soluble calcium salts and other soluble salts of heavy metals, salt-in these colloids.

It was found also that the non-ionic surface active agents appear to coordinate with hydrated calcium ions both in solution and at the solid-liquid interfaces. The efficacy of non-ionic materials in improving detergency in hard water is attributed to (1) formation of soluble complexes with calcium, thus preventing the formation of insoluble calcium soaps; and (2) enhanced formation of a protective layer of the non-ionic colloids in the solid surface at which calcium and other heavy metal cations are adsorbed. T. M. Boscher, G. E. Myers, D. C. Atkins, *J. Colloid Science* 6, No. 3, 223-235 (1951).

Coconut Substitutes

In view of a shortage of edible fats in India, studies are being made of coconut oil substitutes in soap and hair oil industries. Hydrogenated rosin soap was found to give good lather values, and proved better than ordinary rosin soap. It was also found to retard spotting in soap on storage. Combinations of lauric acid soap and hydrogenated rosin gave satisfactory results; however, the substitution of Pisa fat (lauric acid) by peanut oil and hydrogenated rosin reduced the stability of the lather.

In substituting tallow by hydrogenated peanut oil, a fair amount of lather was obtained, but this was thin and subsided within 24 hours. This may be accounted for by the conversion of oleic acid to stearic acid and partly to iso-oleic acid during hydrogenation. The soaps of these two acids have less solubility and wetting action at low temperatures.

It is concluded that coconut oils can be substituted in soaps by suitable mixtures of lauric acid rich fats,

Soil Removal From Nylon

The effects of various types of detergents, concentration of detergents, temperatures of washing solutions, and lengths of wash period on the per cent of soil removal from filament nylon crepe were studied using a "Launderometer" and a washing machine.

Comparable results on soil removal ability of the different detergents in the Launderometer and washing machine are obtained under the following conditions: Concentrations of .075 and .15 per cent, temperature of 130° F., and a 20 minute wash period. The general grading or rank of the detergents tested in each machine, is more or less the same, however, more soil is removed in the washing machine than in the "Launderometer."

Soil removal tests were made at .075 and .15 per cent concentrations. At .075 per cent concentration, in both the washing machine and "Launderometer," the non-ionic detergent indicated the best soil removal properties; soaps gave best results at .15 and .3 per cent in the "Launderometer." Under all conditions tested, the sulfonated ester was very poor. In general, alcohol sulfates were found to be better than the alkyl aryl sulfonates; and a built detergent is somewhat better than an unbuilt detergent. In general, an increase in the concentration of detergent will increase the amount of soil removed. For almost all of the detergents studied, there is an optimum concentration somewhere around .15 per cent for washing nylon in the "Launderometer" and washing machine.

Detergents tested were: a built soap, unbuilt soap, unbuilt non-ionic, built alcohol sulfate, unbuilt alcohol sulfate, built alkyl aryl sulfonate, unbuilt alkyl aryl sulfonate, sulfonated amide, and sulfonated ester. B. N. McKee, E. D. Roseberry, *Rayon & Synthetic Textiles* 32, No. 5, 62 ff, No. 6, 54 ff, (1951).

castor oil, peanut oil and hydrogenated rosin. S. C. Gupta, J. S. Phadnis and J. S. Aggarwal, *Soap (India)* 4, No. 5, 11-15 (1951).

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Revise Alkali Booklet

A new and completely revised edition of its technical and engineering service bulletin No. 9, "The Analysis of Alkalies", was issued recently by the Solvay Sales Division of Allied Chemical & Dye Corp., New York. The third edition has been substantially enlarged and now contains 72 pages of text, tables, charts and indices. New additions or revisions include the recalculation of analytical factors to the basis of the 1948 International Atomic Weights, a colorimetric test for iron and copper and a temperature correction table for volumetric solutions. Copies are available without charge from the advertising and sales promotion department of Solvay at 40 Rector St., New York 6.

New Case Sealer

A new line of short case sealers for corrugated shipping cartons has just been announced by A-B-C Packaging Machine Corp. of Quincy, Ill. The new A-B-C "Junior" case sealers are considerably shorter and narrower than present models, and employ a complete new flight chain construction which virtually eliminates the jamming of cartons. They are also easily adjustable and will handle a wide range of carton sizes. Three models

are available: Models L, M and O.

Further information regarding the A-B-C "Junior" case sealers can be secured by writing A-B-C Packaging Machine Corp., P. O. Box 45, Quincy, Ill.

High Speed Packers

A high speed packer for flat bottom containers in a broad range of sizes and shapes, having wide or narrow openings, was announced recently by Frazier & Son, Belleville, N. J. The new unit, designated the "Whiz-Packer" automatic rotary and conveyor combination has been specially designed to handle granular and powdered materials where vibration for a tight pack and the elimination of dust accumulation are major factors. Each model is custom built to fulfill specific needs of production line space, container and product physical characteristics.

Book on Iodine

"Iodine Its Properties and Technical Applications", an 80-page booklet covering the physical and chemical properties of iodine and possible applications, was issued recently by the Chilean Iodine Educational Bureau, Inc., 120 Broadway, New York 5.

Phenylacetic Acid Data

A technical data bulletin on phenylacetic acid was completed recently by Kay-Fries Chemicals, Inc., New York. Information on the properties, specifications, suggested applications and a synopsis of the work reported in the literature is contained in the bulletin. Suggested applications for the acid include insect repellents and perfume compounds.

Improved Test Papers

Cargille Scientific, Inc., New York, recently announced the availability on a commercial scale of test papers for rapid determination of active chlorine in parts per million. These papers replace test papers based on the starch-iodide reaction which is said to be quantitatively unreliable. Single strips of these new papers when dipped into solutions of active chlorine show the following colors: 100 parts per million, deep pink; 150 parts per million, pale pink; 200 parts per million, white. Color charts are furnished for comparison. The test paper can be adapted for other concentrations of chlorine.

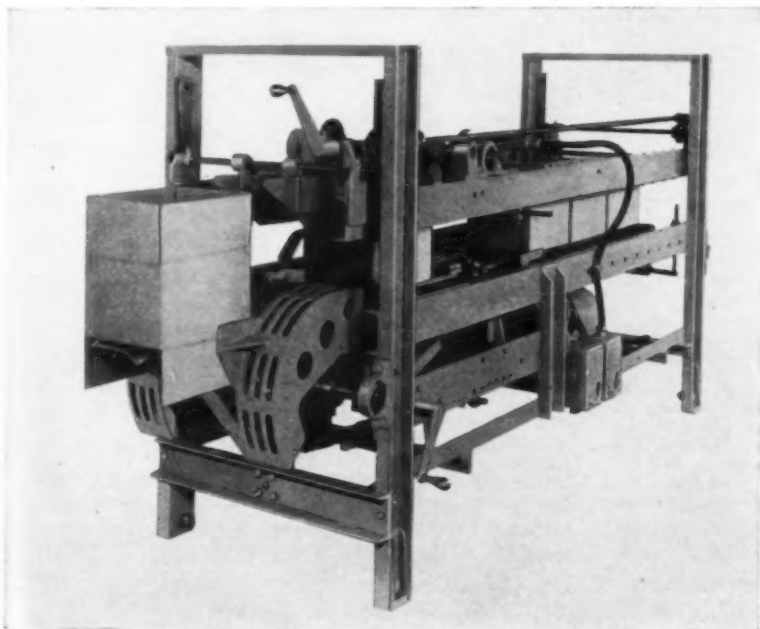
Cos. Chems. Meet Dec. 6

The fall meeting of the Society of Cosmetic Chemists will be held Thursday, Dec. 6, at the Hotel Biltmore, New York. This is the regular annual meeting of the Society.

Carbide Issues 1952 Guide

The 1952 edition of the booklet, "Physical Properties of Synthetic Organic Chemicals" was issued recently by Carbide and Carbon Chemicals Co., a division of Union Carbide and Carbon Corp., New York. The 16-page booklet is issued annually as a guide for users of organic chemicals. The new edition presents data on more than 300 products, 38 of which have been added this year. For easy reference, the chemicals are arranged by family groups. Condensed data on applications are presented and physical properties are given tabular form. Copies may be obtained without charge from the company at 30 E. 42nd St., New York 17.

New "Junior" case sealer announced recently by A-B-C Packaging Machinery Corp., Quincy, Ill., is shorter and narrower than the present models.





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By E. G. THOMSSSEN, Ph.D.

THE pinch of the scarcity of labor is growing increasingly tighter. One has but to scan the "He's Wanted" pages of any daily newspaper to realize that the competition to secure more help in industry is very keen and that the end is not yet in sight. To make the emergency the more annoying, people are migrating from less desirable places and types of work to areas in which conditions are more agreeable and positions pay higher wages. This was impressed upon me very forcibly recently in a west coast city where hundreds had to queue up for a chance to eat before a large restaurant because it was operating with a curtailed force. Employees of the eating place were leaving in large numbers to work at better jobs in the nearby plants which were busy with government work and offering inducements to fill their payrolls. Such situations are not confined to the restaurant business but are found in others as well, especially those offering personal services.

The problem of securing sufficient labor to operate a plant efficiently is very apt to affect the industries we serve as was the case in World War II. The worst part of the labor shortage seems still ahead. Production men realize this and are planning to meet the situation, not all at once, but by a gradual program that assures a trained factory force at all times.

The most important factor of such a program is the training of new workers in all branches to carry out production demands.

The most satisfactory method to train employees quickly for new duties is to up-grade them. This procedure should be planned carefully so as to be applicable to both old and new employees. It should be impressed upon them that job progression and job rotation are open to anyone showing the right aptitude for work requiring special talent. The large ma-

jority of factory people are anxious to advance and every incentive should be exercised to foster this urge. Some plants have introduced supplementary instruction profitably in and out of a



DR. THOMSSSEN

plant to train their employees well. To aid in this method, men and women who are especially adept at certain work are used in the instruction lessons so that they may pass on their acquired knowledge to newer workers. They are especially valuable in helping to select factory personnel because they themselves have thorough knowledge of and experience in actually carrying out the operations under consideration.

While only a small proportion of factory employees in the soap, detergent and chemical specialties fields requires mechanical or scientific skill, the minority is of extreme importance in carrying out the manufacturing operations correctly. The production men are concerned mainly with training the greater number within a plant.

To find employees with specialized skills is often difficult. In cases where trade paper and newspaper advertising fail to attract the desired persons, other sources must be investigated. Such sources include vocational training schools, high schools and special training courses developed under

the guidance of specialists in personnel training. The last of these is usually resorted to in abnormal times but was very helpful during the last war. Production executives who had worked out sound training methods in their plants passed on this knowledge to the vocational training schools which, in turn, adopted them very satisfactorily. Schools having existing facilities used them very effectively in a program of pre-employment and refresher training courses. These provided pupils with the necessary mechanical and mental equipment to up-grade themselves more rapidly in various industries.

Other methods used to increase production per employee are wage incentive plans and consultations with competitors to determine more efficient procedures for performing certain operations. In normal times employees do not respond very readily to increasing their output per man because they fear layoffs and job reductions. In an emergency, however, when work piles up, and there are patriotic motives and incentives of overtime pay and bonuses for greater production. Competitors, too, are more prone to cooperate with each other in efforts to increase the individual's output. No one production man is able to devise the most efficient way to carry out every manufacturing procedure. Individual plants or companies can and usually do devise some better method of labor-saving or establishing production short-cuts to raise production. It is no reflection on an executive to consult with other production heads in discussing ways to carry out an operation more efficiently. In abnormal times, it is helpful for responsible plant men to visit each others' factories freely to compare notes and consult on better methods of getting out work. Such interchanges have proved to be mutually profitable in many cases. In times of stress everyone is interested in improving, as far as possible, methods of operation.

We are all proud of our past record of out-producing any other nation in volume per employee. Others have attempted to adopt our methods with only fair success. The present emergency again presents the oppor-

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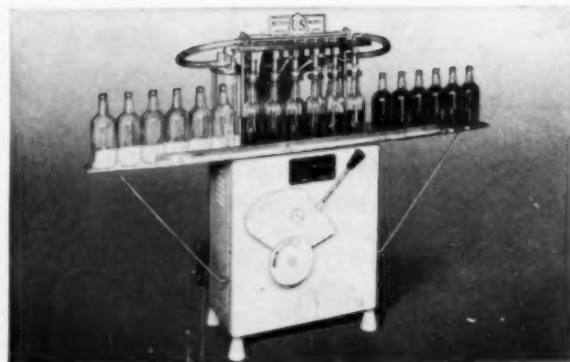
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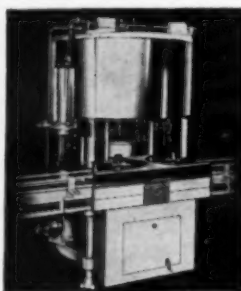
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Lime,
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tunity for initiative to produce even more volume with a curtailed factory personnel.

Dust Collection

BUELL ENGINEERING CO., New York, builder of dust collectors, is featuring the advantages of dust control. The company points out that the collection of dust is no casual matter. It has been shown that production and profits rise, employee morale increases and that plant community relations are greatly improved when dust is kept down. The services of their specially trained technicians is available to anyone interested in this problem.

Powered Trucks

POWERED trucks of various types have enjoyed constantly increasing popularity for more efficient handling of merchandise in plants and warehouses. Clark Equipment Co., Battle Creek, Mich., builder of hand pallet trucks, stackers, platform trucks and towing tractors, recently introduced a new machine. It features a motor-in-drive-wheel, which shortens the truck and results in more load on the truck wheels, less weight on the rollers and increased clearance underneath. Further details are obtainable upon request.

"Dynel" Filter Cloth

CARBIDE & CARBON CORPORATION'S (New York 17) new synthetic fiber, "Dynel," is being used for weaving filter cloths. These cloths do not stretch or shrink, are acid resistant and do not ravel. "Dynel" withstands the action of hot acids, and also is being used to hold water softening chemicals in domestic softeners.

Polish Thickener

KELCO CO., New York 5, recently issued a booklet, "Algin at Work," which is available to manufacturers who are potential users of Kelco's products. Among items described is "Kelcoloid" hydrophilic powder, available in high or low viscosity grades, and finding use as a thickener, stabilizer and suspending agent in polishes and acidic cleaning compounds.

The material is completely soluble under neutral or acidic conditions in hot or cold water and forms a thick solution that cannot be gelled by heating or cooling.

Sequestering Agent

THE technical service department of Chas. Pfizer & Co., Brooklyn 6, New York, is offering information, samples and prices of gluconic acid as a sequestering agent for metallic contaminants. The company claims that traces of metals like iron, aluminum or copper are picked up from pipe lines and rendered inactive by small additions of this acid. Gluconic acid is non-toxic, non-volatile and non-corrosive. It is compatible in detergent formulations.

Double Acting Cleaning Machine

A PNEUMATIC cleaning machine that operates with both compressed air and vacuum is attracting the attention of factory maintenance men. It resembles a bag type vacuum cleaner. The bag of the new unit, however, is attached to the operator's back. The handle of the rod contains two pipe lines which are operated by switch buttons. One button releases air at a pressure of 80 p.s.i. that pulses out the air at 2000 blasts per minute to reach dirt in places not available to vacuum collection. By pressing the second button dirt and other accumulated matter thus released is collected in the vacuum bag. This machine is to be had from Patterson Products Co., Detroit 2, Mich.

Liquid Meter

MANY smaller plants depend upon a calibrated stick to measure liquids in processing a batch of their specialty. This easily results in errors or non-uniformity of finished products. Neptune Meter Co., New York 20, N. Y., makes a liquid auto-stop meter that may be attached to the supply line to forestall spoiled batches. The workman sets the meter to deliver the desired quantity, opens the valve and the meter shuts off automatically when the accurate amount of liquid is delivered. It also keeps a record of the accumulative amount of liquid used. Neptune bulletin no. 566

describes the various types of meters company has available.

Cooling Sections

SELF contained elements made of gray iron for assembly into complete larger units for cooling liquids are being built by National Radiator Co., Heat Transfer Division, Johnstown, Pa. These heat transfer devices have several desirable features. Among which are high heat transfer areas, little corrosion, maximum water utilization, standardized parts and self-supporting, stable, simple foundations.

Up Halazone Tablet Output

Halazone tablets, now produced on rotary tableting presses of F. J. Stokes Machine Co., Philadelphia, are being turned out in greater quantity by Abbott Laboratories, Chicago, one of the leading producers, it was announced recently. The tablets, employed in World War II for purifying water, are used one to a pint of water. They are small and convenient to carry, and find use in providing non-contaminated drinking water in cases of floods and other disasters.

New Paul Catalog

J. C. Paul & Co., 65-year-old Chicago manufacturer of polishes, waxes and cleaning compounds, has just issued a new catalog describing the company's line of 30 products for institutional, commercial and consumer use. New materials used for equipment products, and new techniques in maintenance methods, are reflected in the addition of six items to the line since the last catalog was issued in 1949.

Among the new commercial items is "Krystyl-T," a tasteless, odorless last tank rinse that is claimed to be non-irritating to hands when used as directed. It is active as a bactericide, germicide, deodorizer and disinfectant. Still heading the company's products is "Burnishine," the original liquid metal polish, made by the firm for more than half a century. The new catalog may be obtained from J. C. Paul & Co., 930 Roscoe St., Chicago 13, Ill.



The popular Bobrick 7 and 7MG soap dispensers are once again included in our complete line of soap dispensing equipment; Bobrick 829 Pullman Dispenser and Bobrick 860 Valve are also again available due to changes in government regulations. Bobrick 7, originally designed and manufactured in 1908 and continuously developed and proven in service since that time, has a solid, one-piece bronze body with chromium finish and a tamper-proof lock top. It is available with either clear glass or chromium plated brass globe firmly cemented to the body.

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SOAP and SANITARY CHEMICALS

PRODUCTS AND PROCESSES

Germicidal Detergent

A non-alkaline soapless skin detergent containing three per cent bis(2-hydroxy-3, 5, 6-trichlorophenyl) methane (hexachlorophene) was found to be more effective than a liquid germicidal detergent, containing alkylamine hydrochlorides with 2.5 per cent phemerol. Both detergents were superior to a liquid soap, containing two per cent bis(2-hydroxy-3, 5, 6-trichlorophenyl) methane, based on soap content. *Proc. Penna. Acad. Science* 24, 26-9 (1950) through *Chemical Abstracts*.

Soap Scouring Pads

Metallic wool is combined with a sodium soap containing sodium borate, which adheres to the whole metallic surface of the wool. The soap not only remains fixed to the surface of the wool, but also protects it from rusting. A 65 per cent steel wool may be combined with 35 per cent soap. The wool is immersed in the solution of soap at the boiling temperature, and allowed to dry out at room temperature; it is cut into pieces, and then dried again for six hours in a special drier kept at 50°. Italian Patent 449,590 through *Chemical Abstracts*.

Detergent for Oil Tanks

A new method for cleaning oil tanks (as is necessary in changing over from dark to light products) is described by the Groom Patents Co., Bromley, Kent, England. The system uses a hot aqueous detergent (150° F.) at a pressure of 100 p.s.i. or lower, discharged at point of use at four gallons of liquid per minute. The solution is recovered automatically, recirculated, and can be used for cleaning many different tanks. The oil extracted from the detergent solution is also reclaimed.

The detergent solution is a hot alkaline degreaser, containing a syn-

thetic wetting agent, in a concentration of 7½ to 10 per cent. The detergent acts upon the deposit in the tank, which consists usually of asphaltic residuals or bottom sediment, and removes this by a combination of dissolution, reduction of interfacial tension, and scouring.

By the Groom system, using one manual projector, it took an equivalent of 58½ man hours to clean a tank to bare dry metal, as compared with 1,472 man hours to do the job by hand-cleaning methods. *Chemical Age* 65, No. 1679, 353-354 (1951).

Bubble Bath Products

In formulating foam bath products, it is pointed out that triethanolamine lauryl sulfate and various other liquid detergents are apt to deteriorate and lose some of their high foaming capacity when kept for long periods, as aqueous solutions in storage. The chloresulfonated fatty alcohols do not seem to be at such a disadvantage in this respect. Modern sequestering agents, such as "Irgalon BT," may have a stabilizing action in such formulation, and should be investigated. The alkyl aryl sulfonates have been found to be relatively stable in solution, but do not produce a profuse foam.

Water soluble gums and gum substitutes, when used in weak dilution provide foam retention properties, and thus are valuable additives in foam products. These products function by strengthening the walls of the bubbles, thus preventing the foam from collapsing too rapidly. However, gums also tend to reduce the size of the bubbles.

The following formula is a typical liquid foam bath preparation:

	parts
wetting agent (soap compatible)	20
coconut/potash liquid soap	10
gum arabic	1
glycerine	8

perfume	1
water	60

For use in hard water, the preparation may be modified by adding up to ten per cent tetrasodium pyrophosphate or "Calgon." A suggested foam bath powder has the following composition:

	parts
sodium lauryl sulfate	55
sodium carbonate (dried, powdered)	30
saponin	7
soluble starch	7
perfume	1

Borax may be used in place of the soda if desired, and powders should be sealed in inner, water resistant envelopes. *H. Streatfield Soap, Perfumery, and Cosmetics* 24, No. 8, 775-780 (1951).

Mechanical Dentifrice

A new dental preparation for cleaning teeth with mechanical equipment contains dibasic ammoniated phosphate, carbamide, a synthetic detergent, pumice, and glycerine; the latter serving as the binding agent. Glycerine's plasticizing effect allows the paste to be used without water. The glycerine is said also to help preserve the high ammonia content during shelf life. The product is made solely for professional use. *Glycerine Facts*, 5, Sept. (1951).

Chlorophyll Manufacture

Dried grass or lucerne, raw materials for production of chlorophyll, may be extracted by two methods. One depends on the rotating drum system, followed by filtration, while the other works on the Soxhlet principle, in which a specially designed plant is used. Cold and boiling solvents are used; these may be benzene, acetone, light petroleum or trichloroethylene. Evaporation of the solvent gives what is termed a "crude" chlorophyll. For many purposes, this grade is regarded as sufficiently pure. Purer grades are obtained by refining processes to remove the vegetable oils, waxes, etc. Water-soluble chlorophyll, may be produced by saponifying with potassium hydroxide. *Manufacturing Chemist* 22, No. 8, 305-7 (1951).

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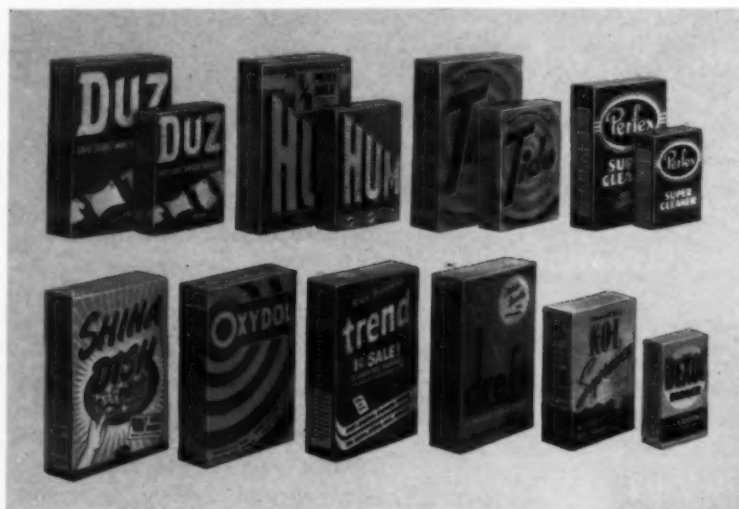
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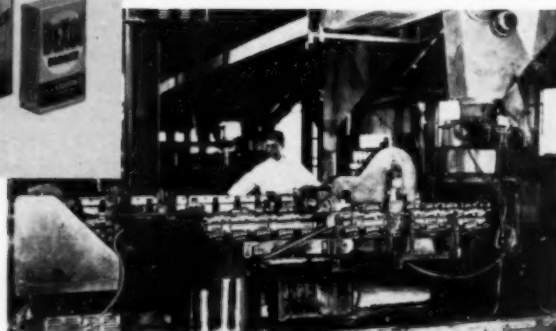


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SOAP and SANITARY CHEMICALS

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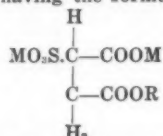
402 Bowen Building
Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50¢ for each copy desired. \$1.00 for Canada. They will be pleased to give you free preliminary patent advice.

No. 2,562,207. Continuous Method of Washing Soap, patented by Ronald Vincent Owen, Sale, England, assignor to Lever Brothers Company, Cambridge, Mass., a corporation of Maine. A continuous method of washing soap for extracting glycerine therefrom in the absence of centrifuging is described, which comprises continuously mixing, in a zone of agitation, a continuous stream of glycerine-containing soap with a continuous stream of lye, thereby continuously washing the soap in said soap stream with the lye in said stream of lye to transfer the glycerine from the soap to the lye and forming a combined stream of washed soap and glycerine-enriched lye; continuously passing said combined stream from said zone of agitation into a settling zone within a vessel filled with soap and lye separated into an upper layer of soap and a lower layer of lye, said combined stream of washed soap and glycerine-enriched lye being introduced into said settling zone below the surface of the layer of soap in the vessel, the lye in said settling zone descending by the action of gravity to the layer of lye in the lower portion of the vessel and the washed soap ascending to the upper layer of soap to form a thin, quiescent surface stratum of washed soap; continuously withdrawing a thin stream of washed soap from the surface stratum in the settling zone by overflow at the top of the vessel; and continuously withdrawing glycerine-enriched lye from the layer of lye in the lower portion of the vessel; the rate of introduction of soap and lye into the settling zone and the rates of withdrawal of the washed soap and the glycerine-enriched lye from the vessel being interrelated and adjusted to the space

available in the vessel to avoid occlusion of lye in the washed soap withdrawn from the surface of the settling zone and to maintain the proportion of soap to lye in the vessel substantially constant.

No. 2,562,156. Wetting and Detergency Composition, patented by Emil A. Vitalis, Springdale, Conn., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine. The patent describes a wetting and detergent composition comprising essentially a surface active material which is a monoalkyl sulfosuccinate having the formula



in which M is a member of the group consisting of alkali metal and ammonium radicals and both M's are the same, and R is an alkyl radical of from 12 to 18 carbon atoms, and a water-soluble inorganic cobalt salt which is capable of increasing the water solubility of the mono-alkyl sulfosuccinate, said cobalt salt being present in an amount the minimum range of which is from 0.25 mol to 2.0 mols and the maximum amount is 10 mols for each mol of the sulfosuccinate.

No. 2,559,091. Method and Solution for Producing Insecticidal Aerosols, patented by Julian R. Reasenberg, Brooklyn, N. Y., assignor to Mizzy, Inc., a corporation of New York. The patent describes a liquid solution of a parasiticide in trichlor monofluor methane and carbon dioxide under pressure.

No. 2,560,097. Hand Cleaning Tablet, patented by Cherry L. Emerson, Jr., Newton Highlands, and William R. Cumming, Boston, Mass., assignors to Lawrie L. Witter, as trustee. The patent covers a dry one-use cleaning tablet having a dry strength sufficient to sustain it against breakage in transit and storage and a void content sufficient to cause it readily to absorb water and rapidly disintegrate in the presence of moisture, consisting essentially of a solid ionic organic detergent and a substantially water insoluble solids filler mixed together and compressed at a pressure of about that given by the expression $P=35,000e^{-2D}$ in which D is the weight fraction of detergent in the tablet and e is the base of the natural logarithms and has the value of 2.72,

the detergent being not less than 0.125 and not greater than 0.75 of the tablet weight and the tablet having a gas void volume to solid volume in a ratio of not less than 0.24 and not greater than 0.76, the tablet being readily crushed and disintegrated in the palm of a hand when brought into contact with water.

No. 2,562,208. Fungistatic Composition, patented by Domenick Papa, Brooklyn, N. Y., and Erwin Schwenk, Montclair, N. J., assignors to Schering Corporation, Bloomfield, N. J., a corporation of New Jersey. A fungistatic preparation is patented comprising a vanishing cream composition containing from about 2% to about 5% of a zinc salt of β -(p-chlorobenzoyl) acrylic acid.

No. 2,560,055. Smooth-Grip Friction Cleanser, patented by Robert W. Westfall, Sunland, and Robert E. Lenihan, Los Angeles, Calif. The patent describes a composition for use in reconditioning surfaces and the like consisting essentially of by weight, from 40 to 60 parts hardwood ash, from 35 to 55 parts fuller's earth, and from 1 to 10 parts powdered rosin.

No. 2,560,839. Detergent Composition, patented by Jackson J. Ayo, Elizabeth, and Ferdinand J. Gajewski, Linden, N. J., and Herbert L. Sanders, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware. A detergent composition is described particularly adapted for use in mechanical washing operations, comprising from about 3 to about 30 per cent by weight of a highly foaming compound selected from the class consisting of hydroxy polyalkyleneoxy ethers and polyalkyleneoxy thio-ethers of a compound selected from the class consisting of aliphatic alcohols and phenols, said alcohols and phenols having at least one hydrocarbon radical containing at least 4 carbon atoms, and the alkyleneoxy groups in said hydroxy polyalkyleneoxy ether and polyalkyleneoxy thio-ether radical numbering at least 6, from about 2 to about 10 per cent by weight of a water-soluble alkali metal soap, from about 3 to about 30 per cent by weight of an alkali metal pyrophosphate, with water being substantially the balance.

No. 2,558,942. Sanitizing Composition, patented by Craig Eagelson, Washington County, Oreg. The patent describes a sanitizing composition comprising calcium hypochlorite, calcium acid phosphate, a wetting agent, a filler and an insecticidal compound comprising at least one member of the class consisting of dichlorodiphenyl-trichloro-ethane, methoxy dichlorodiphenyl-trichloro-ethane, dichlorodiphenyl-dichloro-ethane, hexachloro-cyclohexane, dianisyl-trichloro-ethane, the chlorinated bicyclic terpenes, and chlorinated naphthalene.

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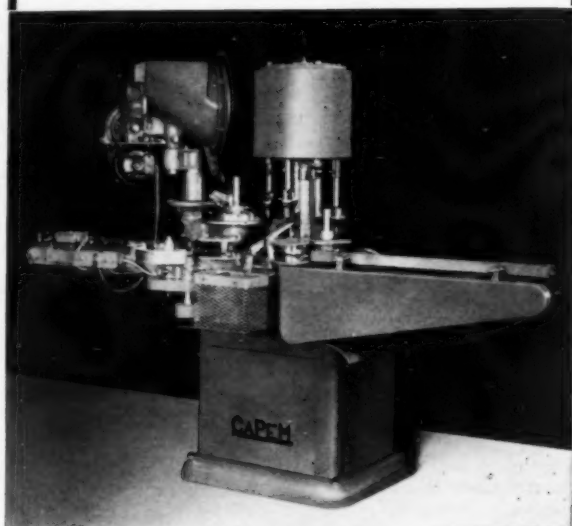
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SOAP and SANITARY CHEMICALS

By John W. McCutcheon

THE necessity for good laboratory control in plant processes is generally well appreciated in most plants. However, on a recent visit to a large manufacturer of synthetic detergents it was noted that efforts in this direction left something to be desired. The difficulty at this plant was one of moisture control in the spray drying operation. To get to the bottom of things, the records were called for and it was noted that two figures for solids content of the slurry were present on each daily operating report. When questioned on this point it was learned that both tests were plant conducted—one being based on rapid moisture by hot-plate method and the other by specific gravity on a standard diluted sample. The last method was a special one developed for rapid control. The difference between these methods averaged about 2 per cent from laboratory values by the standard distillation method. When the corresponding laboratory tests were requested it was learned that they were not available, as such tests were done only about once a week.

Several points indicative of poor control technique are quite evident. In the first place, experimental control methods should not have been handed over to the operators until they had been standardized to a point in close agreement with best laboratory values. For the operators to run two tests gives them the feeling that both methods are unsatisfactory and that it doesn't matter much whether the solids content of the slurry was held within close limits or not;—an attitude reflected in the variable results obtained. In the second place, it appears that the necessity for such tests was the result of poor operating technique or lack of accurate controls. In all probability a weight scale, metering device or tank

gauge would have made operation so uniform that laboratory control would have sufficed. Thirdly, the laboratory



MR. McCUTCHEON

tests when run were not entered onto the production sheets so that there was no direct correlation between any plant batch and its laboratory analysis. Most important of all, the rate of production was missing, although such data as pressures, temperatures, draft conditions, power consumed, etc. were entered hourly.

The report had been designed from the point of view of a research chemist with no thought to its practical help either to the production foreman or the plant operator. For the particular investigation at hand, such reports have an extremely small value. To summarize: production reports should be designed to cover only essential operating data, they should call for control tests of proven accuracy, should show the correlation of such tests with laboratory control where available and should indicate production rate. Wherever the operators have to carry out an analytical test for control purposes, such test should be reviewed periodically, as it represents a weak link in the control. Often such

tests can be eliminated by the use of scales, automatic recorders or other mechanical devices.

* * *

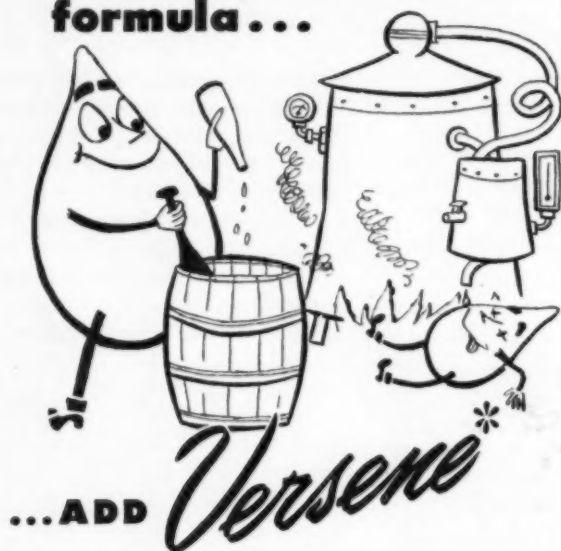
TALL oil periodically becomes an important raw material when fat prices are high. Present production has reached a level of something over 300 million pounds per year in the U. S. A. It is a by-product of the paper industry and, therefore, its production is not dependent upon supply and demand. Although not all present companies operating pulp mills on southern pine wood recover their tall oil, there is a sufficient number doing so to indicate that production will probably not double in the next ten years, and more than likely will not reach an annual rate of more than 400 million pounds. No doubt the synthetic detergent industry will continue to absorb a great proportion of this although other diverse uses are becoming important, particularly non-metallic ore floatation.

There are several factors for this limiting value. In the first place, present production of southern pine pulp is between six and seven million tons a year. At 60 pounds of crude tall oil per ton of pulp, this represents a present maximum availability of about 430 million pounds per year. Present recovery is about 75 per cent of this. Secondly, there is some possibility of utilizing hard woods for pulp making in southern mills. In the third place, northern pines do not yield a high fat content and therefore probably will not be a factor of any great future importance as far as production of tall oil is concerned. Under the guidance of the Tall Oil Association the technical developments in processing and in diverse applications have reached a very high level. It appears reasonably certain that a stable market will be found for all material available, even under adverse economic conditions.

* * *

SOAP equipment has become so well standardized through the years that a new application is the exception rather than the rule. In an inspection of a plant some time ago, a laundry bar soap, was being made without the use of the usual framing and slabbing at considerable saving in equipment and floor space. The process

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consisted of passing the hot soap through a cooling chamber directly into a plodder. The bar from that point on was cut and wrapped identical to that for a toilet bar. A very satisfactory product was being made. Unfortunately, this idea arrived about 30 years too late.

* * *

THE use of hexachlorophene (G-11) manufactured by the Sindar Corporation in soaps and detergents continues to find an expanding soap market in shampoos and bars. Its use in soap products is covered by patent and requires a license. There is no restriction on its use with synthetics. In the latter field, of course, it enters into direct competition with the quaternary ammonium salts which are very effective germicides. These latter products, however, can only be used with cationics or nonionics. When anionic synthetics or soap is used, then hexachlorophene is called for. It is claimed that some synthetics, particularly the non-ionics, require a slightly higher concentration of "G-11," than they do in an equivalent soap solution. However, the Sindar Corporation points out that this is not always true and with certain types of detergents the reverse holds. For those contemplating its use, care should be taken to test each formulation thoroughly before use.

— • —

Package Machinery Direct.

Publication of a new directory covering makers of all types of packaging machinery was announced recently by Packaging Machinery Manufacturers Institute, 342 Madison Ave., New York 17, N. Y. It is designed as a ready reference for purchasing agents, factory superintendents and others interested in this type of equipment. It is leather covered and in loose-leaf form so that it can be kept up-to-date as new information is issued. The directory is divided into two sections. One section lists the kind of equipment desired and the names of manufacturers making it. The other section, alphabetically arranged, gives names and addresses of the machinery makers and complete information on the machines made by each firm. The directory sells for

\$10 and may be obtained directly from the Institute.

— • —

New Demineralizer

The availability of a new "Mono-Bed Demineralizer" was announced recently by Penfield Manufacturing Co., Meriden, Conn. The new Penfield unit operates on the basis of cation and exceptionally strong base anion exchangers intimately mixed in a single unit tank, thus providing in one container the equivalent of a large number of "multiple bed systems." The raw water passes through this mono-bed column once, and comes out with a mineral content of approximately zero, according to the maker. Models are available for low rates ranging from a few gallons per hour to 5,000 gallons per hour and up. Complete catalog information is available by writing the company at 19 High School Ave., Meriden, Conn.

— • —

Book on Water Pollution

Industrial Water Pollution by M. D. Weiss and A. S. Aries & Associates. Published by Chemonomics, Inc., New York. 142 pages, 6 x 9 inches. lithoprint, paperbound, price \$5.00.

This handbook lists and discusses the regulations on water pollution now in effect in every state and territory of the United States. The essential aspects of the legislation in each state have been extracted, especially with respect to the effect of the laws upon industrial establishments within the state. Where Standards of Water Quality have been adopted, these are given in their entirety. A list of all state agencies concerned with water pollution is included in the appendix.

— • —

Mop Data Sheets

American Standard Manufacturing Co., Chicago, recently issued data sheets, in color, on individual items in its line of wet mops, dust mops and applicators. These sheets give such information as weights, dimensions, spreading surfaces, handle lengths and related information. The data sheet on the company's "Victory" wet mop explains how a mop wears out. It explains that the mop simply unwinds. Every ply or thread of every

piece of yarn begins to untwist the moment it is put into service. Consequently, the one with the longest individual fibres and the most twist takes the longest to unwind, and therefore, lasts longer. The whiteness of the cotton is not necessarily a test of how long or how satisfactorily a mop will wear or perform, it is stated in the sheet. Copies may be had by writing the firm at 2515 S. Green St., Chicago 8, Ill.

— • —

pHisoHex for Scrub-Up

A new surgical scrub technique recommends the use of "pHisoHex," a soapless sudsing detergent incorporating an antiseptic and hexachlorophene, in pre-operative scrub-up. It is claimed that a three-minute scrub with "pHisoHex" is as effective in killing germs as the ten-minute "routine scrub" with soap, water, and brush, which has been in wide use. "pHisoHex" is produced by Winthrop-Stearns, Inc., New York.

— • —

Plastic Pipe Use

The use of plastic pipe, to avoid corrosion by chemicals and atmosphere in the soap industry, laundries, plants manufacturing bleaches, and other industrial chemical plants is discussed in a recent bulletin of Republic Supply Co. of California, Los Angeles. "Uscolite," a rubber-base plastic, and "Saran," a phenolic-base material, are used in the manufacture of plastic pipe. The former is claimed to be resistant to most commonly used chemicals, has high impact strength and sustains pressures up to 150 psi at 70° F. Recommended working pressures are in inverse ratio to the increase in pipe diameters. The difference in composition of the two plastics gives these materials slightly different qualities of resistance to corrosion of different chemicals. Many firms are installing plastic pipe wherever solutions are within the temperature ranges which the plastic product will tolerate. Laundries and manufacturers of bleaches are among those finding extruded plastic pipe an answer to the corrosive action of chlorine in gaseous form or in solution, it is claimed. One soap company is reported to have sub-

stituted "Uscolite" in a 10,000 foot pipe layout.

Shave Products

(From Page 77)

ommended(7,29) product of this sort is made as follows:

	parts
Coconut oil, Cochinchina grade.....	113
Soda lye, 35°Be.	140
Potash lye, 50°Be.	170
Stearic acid	550

The soap is made in a crutcher in the same manner as described for the shaving stick base. It is dried at a low temperature and pulverized with the addition of about 25 per cent of dry tallow soap chips and five per cent of talc. Excessively fine grinding should be avoided because this causes dusting and sneezing during use.

Some shaving powders consist simply of a powdered soap with good lathering properties, plus a suitable emollient material. A perfumed preparation of this kind is made from: (15)

	parts
Coumarin	0.2
Oil of bergamot	1.0
Methyl salicylate	0.2
Spermaceti, finely powdered	18.0
Coconut oil soap, powdered to make	1000.0

Liquid Shave Soaps

THE omission of liquid shaving soaps from the federal specification may be a reflection of the fact that only small amounts of the fluid products are made. As far as could be determined, there are only two such products on the market, although one firm also produces a good shaving liquid for limited distribution, but not for sale. While there seems to be little demand for liquid shaving creams, those who have tried a well made product of this sort will generally concede that they can be efficient and pleasant. Correctly packaged, as with a shaker type, drop-dispensing bottle or closure, they are also quite convenient to use. Indeed, it has been suggested(33) that a dispenser device in the home bathroom, similar to that used for other liquid soaps, would add to their convenience.

It is interesting to note that, despite the small quantities sold, there

is considerable information in the technical literature(7,9,28,33-36) on the production of liquid shaving creams. Thus, according to Cardew(37) the advantages of a good liquid shaving soap are rapid wetting action, quick lathering properties and emolliency. The liquid products are generally divided into two main types; the clear solutions and the milky emulsions which are generally built up with stearic acid.

An example of the first type of liquid shaving soap is given by both Goodman(16) and Thomssen(13) in the following well rounded formula:

	per cent
Coconut oil	12.0
Oleic acid	12.0
Glycerine	10.0
Sugar, powdered	2.0
Sodium lauryl sulfate	1.0
Cetyl alcohol	1.0
Potassium hydroxide, 85%	6.0
Perfume	0.5
Water	55.5

Dissolve the potassium hydroxide, the sodium lauryl sulfate and the sugar in the water, add the glycerine and heat to 150°F. Mix rapidly and add the previously melted mixture of coconut oil and cetyl alcohol. Continue mixing, while heating, for 15 minutes and add the oleic acid slowly. Mix for an additional 10 minutes. Shut off the heat and continue very slow mixing for a half hour.

An example of the emulsion type of liquid shaving soap is given by Vallance,(30) as follows:

	parts
Diglycol stearate	3.0
Sulfonated fatty alcohol	3.0
Triethanolamine stearate	1.0
Cetyl alcohol	1.5
Alcohol	5.5
Glycerine	10.0
Distilled Water	76.0

Dissolve the prewarmed stearates, cetyl alcohol and sulfonated alcohol in the hot water; stirring thoroughly until a smooth white emulsion is formed. When cooled to 120°F. add the alcohol, glycerine and perfume with continued stirring until a homogeneous emulsion is formed.

(To be concluded)

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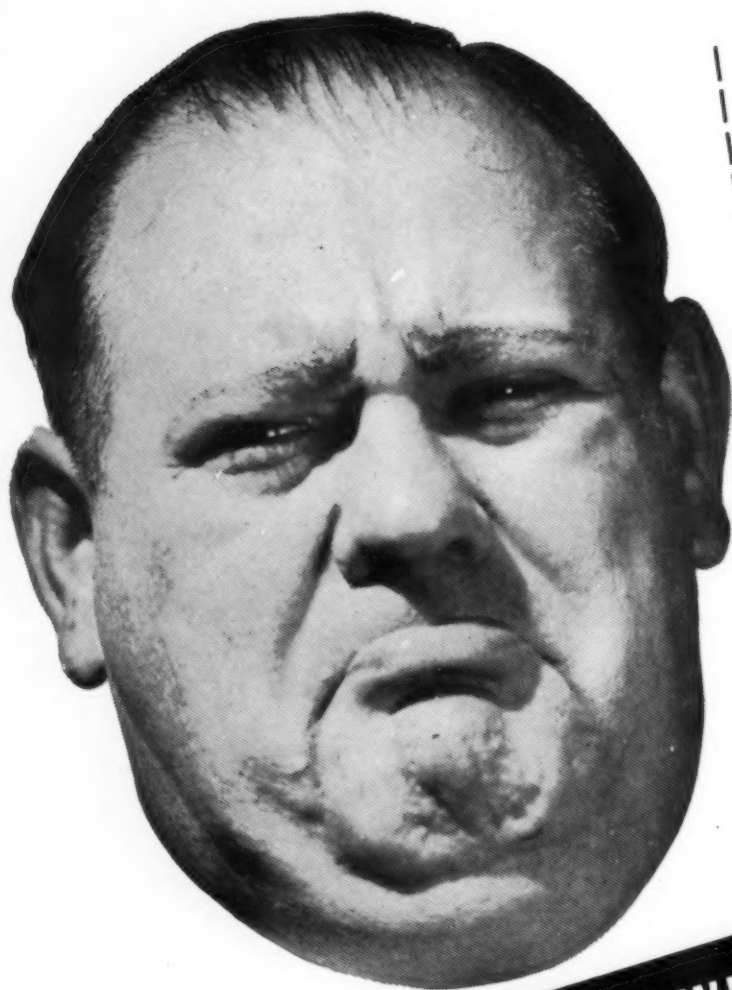
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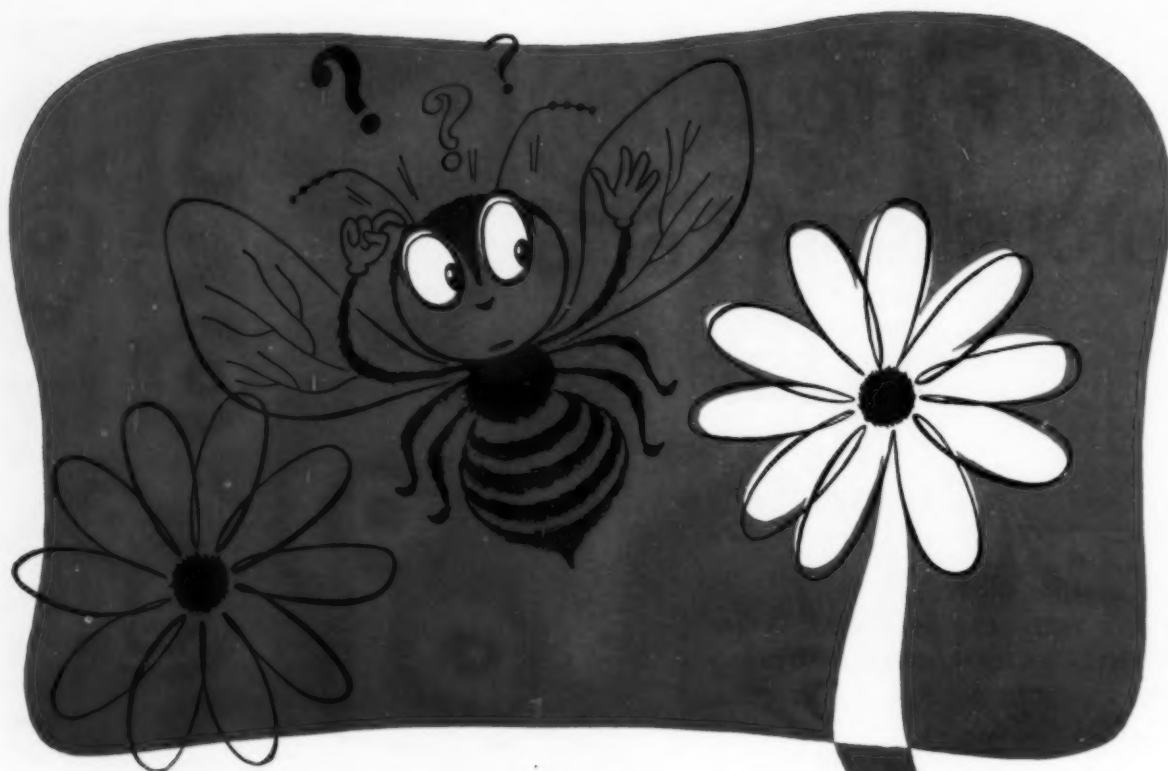
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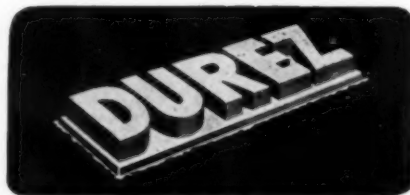
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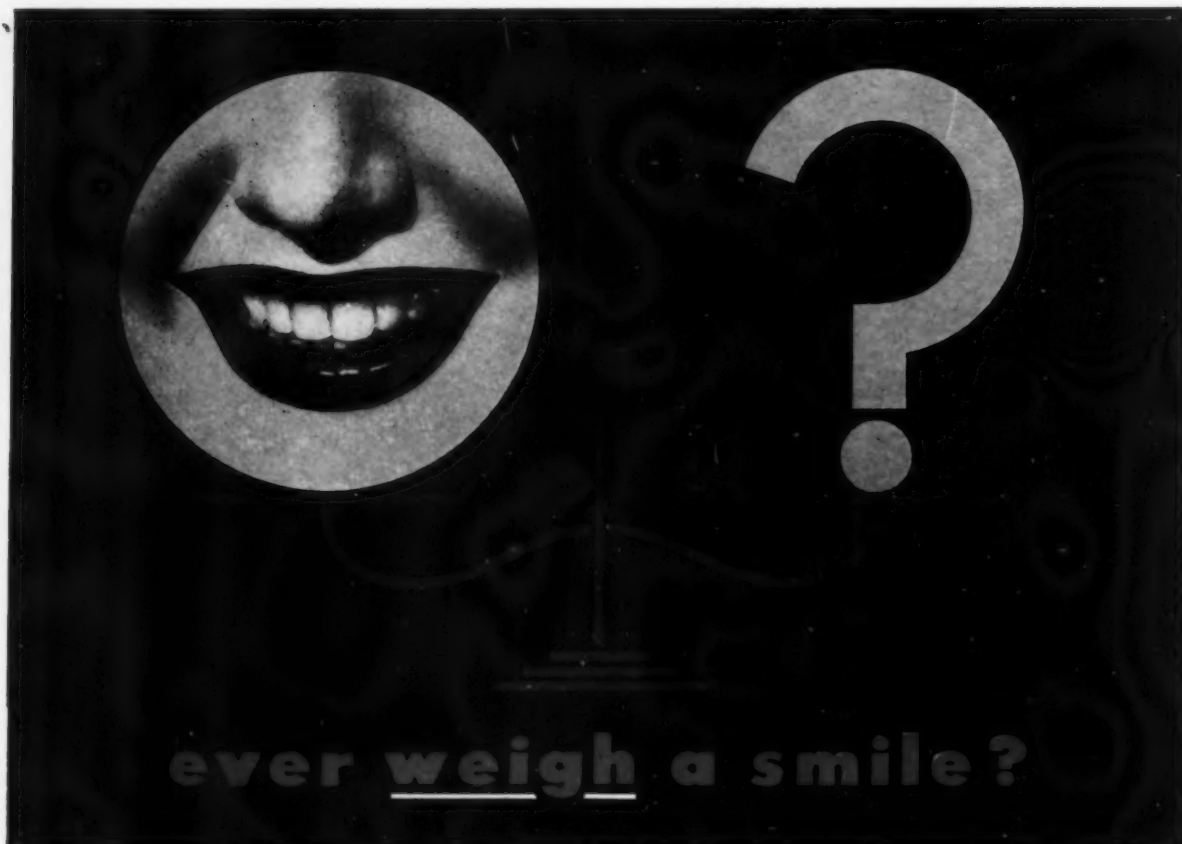
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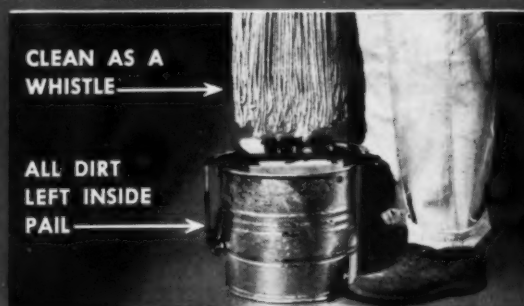
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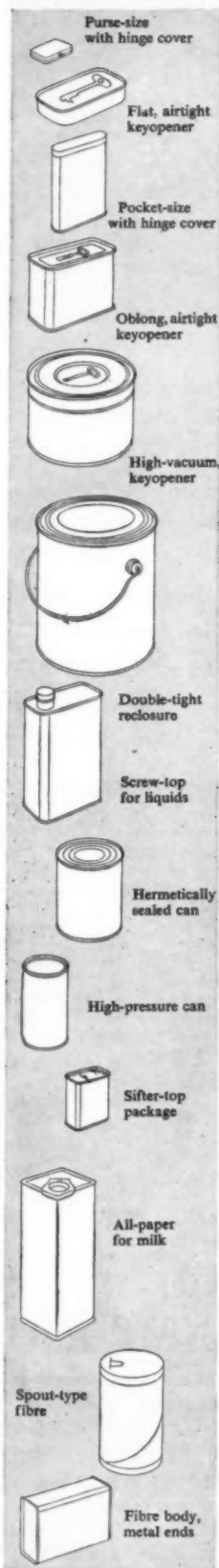
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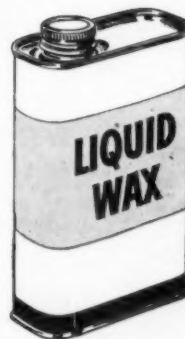
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700	190/195	5 max.	2 to 2½	Nil	Nil
1035	195/200	2 max.	2 to 2½	Nil	Nil
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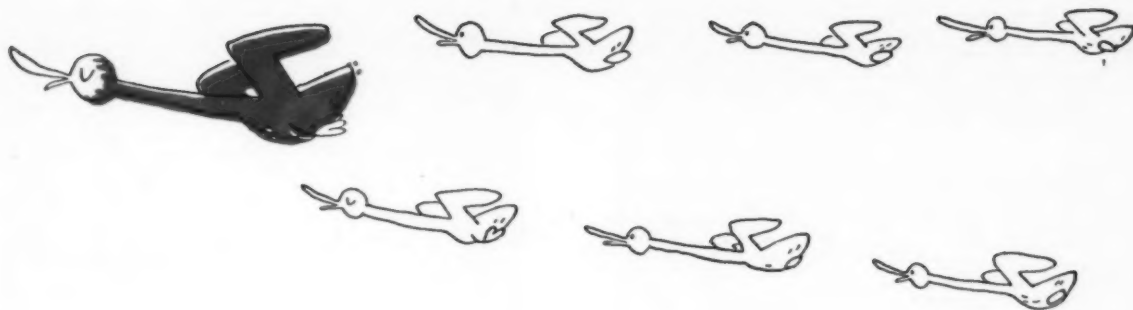
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A SECTION OF SOAP

A NEW disinfectant called for by an Army specification has put the industry into something of a dither. The material, recently announced after considerable investigation by the Department of Defense, is composed of melamine chloride and citric acid. According to current reports, the Army has adopted this new specification exclusively for use on mess kits, other food utensils, and on uncooked vegetables of uncertain origin used in the field by troops. Where the old Army method of boiling water cannot be used, the new material will replace quaternaries and chlorine formerly employed in connection with food equipment. The two main advantages claimed by the Army are high germicidal efficiency and an elimination of toxicity problems.

That the Army planned to come up with a new disinfectant for certain field uses had been rumored, but the secret seems to have been quite well guarded as far as the trade is concerned. Announcement of the specification now would appear to make it official. Whether the product successfully stands up under the acid test of field use, misuse and abuse is something which time alone will tell. If performance comes up to advance notices, it must be pretty good.



IF there is one single factor responsible for the success of the sanitary supply distributing industry, it is local service. While the term "local" may cover anything from an area of several hundred miles in a sparsely populated section to a dozen or more square blocks in a large city, the principle is the same. The jobber, acting as the manufacturer's representative, is also assuming the increasingly large role of ware-

houser for the consumer. More and more the major consumers of sanitary supplies are coming to realize the distributor's function as a nearby source for their sanitary supply wants. In this situation, as the customer's dependence on him grows, the sanitary supply distributor's volume increases and assures his future place as the recognized link between manufacturer and consumer.



AMONG manufacturers, fillers and marketers of aerosol products, the term, "bomb," long since has been taboo. However, the general public, newspapers, and others have continued to use the word as a short, handy description of the average aerosol container. This probably dates back to the earlier days when an aerosol dispensing package resembled in many respects an ordinary hand grenade. For some time, aerosol marketers have felt that this "bomb" designation has created a wrong impression in many quarters, particularly among municipal fire departments, postal authorities, and safety people. It implies degree of danger and explosion which do not exist in practical everyday shipment and use.

Accordingly, the aerosol folks now are undertaking to have the term, "aerosol bomb," dropped from our daily lingo. In its place, they hope to succeed in securing general use simply of "aerosol," or "aerosol package, container or dispenser." In this campaign, we are glad to lend a hand by (1) quit using it ourselves, and (2) urge all others in the trade to do likewise. So, may we suggest to everybody that they cooperate by eliminating "bomb" from all advertising, correspondence, and the like, and to point out to local newspapers and others who may use the term that it is a misnomer and should be dropped?

CLEANING GRAND CENTRAL TERMINAL

By John Regan



Grand Central Terminal, where the "20th Century Limited" berths, and thru which nearly 150 million persons pass in a year.

EVER see a ton of second hand, or chewed, chewing gum? You would, if it weren't for remarkable midnight to dawn efficiencies at New York's Grand Central Terminal. That's how much is deposited on the floors of that vast building's concourses and labyrinths of passageways in a single year. . . . Plus a couple of million cigarettes and cigars beautifully ground and spread into marble and terrazzo floors. . . . Plus the mud, dust, dirt of approximately 150,000,000 pairs of feet. . . . Plus a miscellany of debris voluminous enough to stagger the most hardened street sweeper.

And yet, early each morning, the place is spotlessly ready for another day of the unending assaults of thousands of commuters, other travellers—and the *three to one* proportion of soil-

ing citizens using the Terminal simply as a highway from one building to another. Altogether the normal, and careless, refuse of 50,000,000 actual passengers and of at least 100,000,000 "passers through" must be removed from Grand Central Terminal daily and nightly throughout each year!

How this immense job (1,500,000 sq. ft. to be cleaned, polished and cared for) is accomplished, without interrupting for a minute the complex operations of one of the world's busiest railroad terminals, or splashing detergent on the pants of a single innocent bystander, is a fascinating story.

First, a little about the men behind the brooms. Top executive of Grand Central Terminal is E. B. Moorehouse, the quiet, cool, factual di-

rector of all Terminal operations. His unruffled "plenty of time for everyone or every problem" attitude is reflected fully in each of his departmental managers. It is, in fact, this absence of haste and excitement in a place where laymen might imagine it to abound, which is the basic secret of cleaning and maintenance efficiencies.

Specifically the operation we are discussing is in the direct charge of Clifford Mack as head of the Building Service Department. His responsibilities include, besides cleaning, general maintenance and repair, renting, elevators and tenant service generally.

The man on the firing line, and more directly responsible for the detailed execution of the daily cleaning job, is Philip A. Taralico, whose formal title is Night Foreman. He spends al-

Brass clock above information desk on upper level receiving its nightly polishing. Meanwhile, work of cleaning floors proceeds. Note the time: 1:54 a.m. New York prohibits cleaning until after 8 p.m.

Periodic major cleaning operation of the interior and walls of the upper





First step in cleaning floor of the terminal and passages is attacked by sweepers (above).



Crew wielding squeegees pushes washing solution to one area for removal.



Philip A. Taralico, night foreman, responsible for cleaning, oversees job.

most all his hours after dark and until dawn supervising the actual work.

G. H. Ciciva, who calls himself a "police-dog," but who is actually a cost analyst and cost-cutter is the controlling factor in the requisitioning and specification of materials. Through him, to the purchasing office, pass all orders for cleaning materials for o.k.

Sam Elkind is boss of the storeroom from which materials are directly dispersed as required by Mr. Taralico. Thus, purchasing of materials, while formally completed by the New York Central's main purchasing office which buys for the entire system and all its buildings and facilities, actually begins with Mr. Taralico, goes through Mr. Elkind's storeroom to Mr. Ciciva, to purchasing.

Mr. Taralico tests all materials,

and equipment under actual working conditions. If it passes his use-test, and he finds it better than others similarly employed in the cleaning job, more often than not it becomes part of the storeroom's inventory through the steps outlined; unless Mr. Ciciva's "police dogging" discovers a less costly and equally suitable substitute.

It is a credit to the Terminal management that most material and equipment is bought on the recommendations of its actual user — and so on up the scale — rather than as a "must" handed down from purchasing, which office is concerned with countless operational buying problems as well.

It should be noted, however, that this triple play from the user up, Taralico, to Elkind, to Ciciva to purchasing, is peculiar to Grand Central

Terminal, and not typical of purchasing methods for the entire New York Central system. One reason for this is that Grand Central is a jointly operated facility whose costs and profits are shared by the New York Central R.R. and the New York, New Haven and Hartford Railroad. So that the Terminal is not a wholly owned property of the New York Central, nor is it a separate corporate entity. The executive, clerical, management and purchasing facilities of the New York Central, however, are the vehicle through which the operation of the Terminal is carried on. And the New Haven shares the costs and profits in direct ratio to the number of cars entering or leaving the Terminal. In June of this year, for instance, 35 per cent of the total number of cars entering

level. Section at right has been cleaned; left still to be done.

Unusual view of main waiting room and concourse at 3:35 a.m. as floor cleaning operation nears completion. Dispensing tank appears in right foreground, preceding mop swingers and squeegees.





Materials for cleaning the streamlined diesel engines, such as that shown at left, for pulling all crack New York Central trains, are purchased at Grand Central Terminal.



Unusual view of car washing operation, performed in yards north of Grand Central Terminal, shows brushes scrubbing tops of cars with synthetic detergents. Use of this type of equipment has sped up the washing operation to a few minutes.



Sides of cars are being scrubbed by huge brushes, streams of water and detergent solution. Formerly cars were washed by hand.



Coach seats are given a thorough cleaning periodically, as can be seen in view at lower left where seats are stacked up preparatory to being given a complete washing.

and leaving the Terminal were New Haven trains. Thus, for that month, the financial obligations and earnings of the terminal were shared 35 per cent by the New Haven and 65 per cent by the Central.

But all disbursements, purchasing, etc., are, by agreement, done by the New York Central, which is how the Terminal's cleaning supplies become a function of the New York Central's purchasing office — and at the same time are handled in a way which differs in most respects from the methods applicable to the whole system.

To be specific: W. J. Warnock is in charge for the New York Central of purchases under classifications No. 36 — station supplies. This classification is one of 50 set up by the Interstate Commerce Commission, covering the buying and shipment of all types of railroad equipment. Mr. Warnock, in the case of Grand Central Terminal, almost always, either buys supplies only as requested in the pattern described, — or sends the suppliers' salesman over to E. B. Moorehouse as Terminal manager, — where eventually, Phil Taralico gives them a test decision. For supplies for the balance of the New York Central's vast facilities, Mr. Warnock submits all new prospective products to the company's testing laboratories in Cleveland. Here, either the product is approved as submitted, or specifications are issued which act as the yardstick for purchasing.

Aside from the dual-organizational arrangements of the Terminal — another equally basic reason for Central's purchasing office to treat G. C. T. as a kind of first cousin — is the size of the operation, and the economical desirability of buying everything locally. This factor is further emphasized by the practice of buying reasonable quantities, in deference to storeroom space, weekly or even daily, as opposed to the bulk buying and interstate distribution from a central shipping point, which characterizes most purchasing.

This means that Grand Central is supplied, with rare exceptions, through the services of metropolitan jobbers and distributors — and that the sales effort on their part really centers on Terminal approval, with purchasing

New York's Grand Central Terminal picks up, scrubs up, scours after almost 500,000 smokers, gum-droppers, foot scufflers, paper tossers every day. The story of a superior job in cleaning and sanitation.

simply executing, confirming and bookkeeping the transaction. Cleaning rags, spotting papers, etc.—are about the only commodities which “come down” as a result of a bulk buying, to the Terminal from purchasing.

Don't misunderstand — purchasing is the final authority — but in practice, the terminal is its own boss most of the time.

One more word about the function of the storeroom. Its inventory reflects the bulk purchases of the Central Purchasing Department for all the railroad's facilities—only as intended for use at Grand Central itself; which in turn reflects the volume required by Mr. Taralico's requisition.

All the figures exposed here are that portion of the New York Central's overall purchases broken down for Grand Central Terminal alone.

The Cleaning Operation

THE day force, entirely a “sweeping platoon” so to speak, consists of 27 sweepers, each of whom has an assigned territory or route to patrol continuously and sweep over and over. This unceasing operation keeps the Terminal's huge floors reasonably clear of paper, empty candy boxes, smokers' discards and all loose waste which is vulnerable to a broom and requires no soap, or detergent application. Among these 27 assigned sweepers, there are always a couple of “rovers,” who pounce on a dropped bottle of whiskey, or clear an especially littered corner.

Mr. Taralico's night force, which is our primary concern, actually cleans the Terminal in the strictest sense. It consists of 59 porters and 37 charwomen. The word “porter” in Terminal terminology covers all male cleaning workers, even though some are operators of dispensing tanks, some on brooms or squeegees. The women clean all offices and upper story facilities in the tenanted portion of the Terminal building. The men do all the

heavier scouring, sweeping, washing, mopping, scraping of the Main Concourse and passageways and of the corridors and hallways in the upper floors, stairways, etc.

Altogether the 1,500,000 square feet of soiled surfaces—mostly floors and lower walls—are completely and scientifically cleaned between eight o'clock each evening and 6:30 in the morning. This includes outside sidewalks, which the City forbids cleaning until after eight p.m., all men's and women's wash-rooms, telephone booths and telephone areas, staircases, furniture and facilities in waiting rooms.

Work begins upstairs at eight p.m. — and on the upper and lower concourses and passageways at one a.m. In the tenanted spaces upstairs, the charwomen dust, sweep carpeting, empty baskets and in general restore order to office interiors. The men, with detergent or liquid soap solutions as required by the floor surfaces—sweep, apply solution from tanks and follow with squeegee and mop through all corridors, stairs and stair landings, etc.

At one a.m. the real job of washing an elephant begins in the Main Terminal levels. Here, the first platoon sweeps all loose debris away. The second, using 20 gallon dispensing tanks, apply detergent and/or soap to the area; the third, following closely,

spreads the solution evenly; the fourth, usually composed of four or five men in a slightly staggered line, push 18 pound weighted squeegees, both cleaning and removing the bulk of the solution at the same time. Finally, a mopping - drying operation completes this cycle.

Water, dirt and solution are pushed wall-ward by squeegees and mop wielders, so that when one section is finished, all residue is in one reasonably centered position and can be finally removed by a concentrated squeegee-mop sequence.

While this basic pattern is repeated on all floor space, others polish brass, clean phone booths, wash rooms, lower walls and all areas other than unobstructed floor space. Thus, by dawn, 59 men will have — loosely speaking — “sterilized” the whole Terminal building. Six pounds of chewing gum per night is scraped from these floors!

Meanwhile sidewalks surrounding the building will have been brushed and scrubbed where necessary and periodically during every month, 1500 pounds or so of pigeon droppings will be removed from terraces, balconies, walkways and other projections of the building.

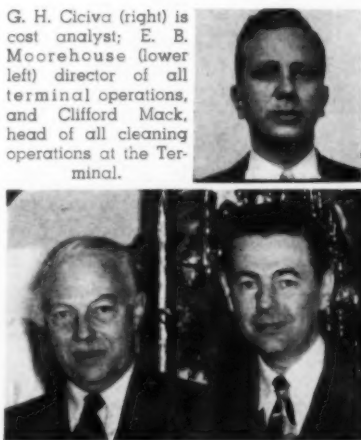
Costs

Labor: Male cleaning help is paid \$11.98 per man per shift. Shifts are eight hours, five days a week. Female help in the same categories, \$11.40 per shift, for the same work-week. For a single year the payroll for all cleaning personnel, sweepers, porters, charwomen, window cleaners, matrons and attendants in wash rooms, totals approximately \$450,000.

Materials, equipment and supplies: A total of \$25,000 is spent on materials and equipment for this Terminal alone. Here is a breakdown of the major items used and their annual cost.

(Turn to Page 171)

G. H. Ciciva (right) is cost analyst; E. B. Moorehouse (lower left) director of all terminal operations, and Clifford Mack, head of all cleaning operations at the Terminal.



Field Testing of Waxed Floors for Slip Resistance

THE problem of determining whether or not a given floor wax is "safe" is one that has plagued manufacturers for a long time. How three users "field test" waxed floor surfaces to determine slip resistance is told in the discussion which follows.

By W. H. Joy
American Telephone
& Telegraph Co.
New York

THE conditions laid down by our moderator narrow the field tests to a single application on a linoleum floor corridor. We would consider this an intermediate step between laboratory tests and full scale field trials. Also only two waxes are to be considered. The tests are considerably complicated when the number of waxes is increased. In connection with contract negotiations we sometimes have to test as many as 15 to 20 different waxes.

Our procedure would be about as follows. The floor would be machine scrubbed thoroughly and rinsed to remove any old coatings and cleaning material residues. It would then be allowed to dry for about a half hour. Two coats of each wax would be applied as evenly as possible using a different clean mop for each wax and allowing a drying time of about a half hour between coats. After a final drying period of about a half hour, at the time when the corridor would ordinarily be opened to traffic, the floor would be appraised for slip resistance by practical foot evaluation.

We have in our group three individuals who have been looking at floor waxes for many years and accordingly have considerable back-

ground in appraising slip resistance. In our opinion there are two types of slip resistance; one the resistance to a flat surface, such as the sole of the foot; and the other to a point contact, such as the heel of the shoe as it meets the floor. The first we feel evaluates the tackiness of the film while the second measures the shear resistance of the film once a slip has started. Both types are important. The resistance to the sole of the shoe is the characteristic most obvious to the general public and also probably prevents slips from starting. The shear resistance probably determines whether the slip is arrested or results in a fall. Accordingly, both types are evaluated. In testing for shear resistance the side of the shoe rather than the heel is generally used as a matter of convenience, particularly if the heel is rubber which will make any wax look good. The test is made by advancing the right foot with the side of the shoe in contact with the floor a little at a time and periodically shifting the weight from the left foot to the right until the foot slips. A fair appraisal of slip resistance can be made by this method. The testing personnel will make individual notes on the waxes which are usually designated by code numbers to disguise their identity. The opinion of the experts will frequently be confirmed by having a miscellaneous group, including women, also evaluate the floor. The corridor is then opened to traffic and the floor checked again for slipperiness after 24 hours and at suitable intervals up to a period of 6 weeks. The reason for this is that we have found that the slip resistance of waxes varies with changes in atmospheric conditions. In general the slip resistance increases with increasing relative humidity. Also many

waxes tend to lose slip resistance as the film dries out and hardens on aging. The floor would also be observed during wet weather since waxed surfaces are particularly slippery when the soles of the shoes are damp. A record of course would be kept of any actual slips and falls. A single fall would be discounted but a series of falls would result in the wax being considered hazardous and its removal from the floor would follow as a matter of course. In our case one of the waxes would always be one of our standard waxes on which we have a long background of field experience.

Over the years we have considered a number of procedures for evaluating slip resistance in the field. These have varied from placing a paper towel under one foot and spinning on it to the use of a gadget known as a slipmeter. The latter consisted of a weight with a leather skid attached to a spring scale, that was pushed along the floor much like a small carpet sweeper. While fair results could be obtained, the meter measured mostly surface resistance, the needle fluctuated excessively, and the reading depended entirely on the speed with which the machine was pushed.

New Testing Techniques

WE HAVE recently developed a new technique which we feel has considerable merit. It was noted that in buffing a series of test waxes the polishing machine tended to speed up with an increase in the sound in passing from a slow to a fast wax, and vice versa. This was particularly noticeable in using a light machine such as The Congoleum Nairn two brush Model H floor polisher which weighs only 17 pounds. It was obvious that the change in speed was due to the

Before 37th Midyear Meeting, C.S.M.A., Chicago, May 1, 1951.

Three wax users and one manufacturer give their views on how they determine what constitutes a "safe" floor finish and methods they use in arriving at such a conclusion. Field testing is considered as the intermediate step between laboratory tests and full scale field trials.

increased frictional resistance of the wax film and that as the machine began to labor it would draw more current. Accordingly an ammeter was placed in the line to measure the change in current. This we believe has given us a direct measure of slip resistance. The results on the whole agree well with foot appraisal and actual field experience. The following data will illustrate this correlation.

Wax	Description	Amperes	Slip Rating
A	Many field slip complaints	2.21	92
B	Standard regular wax	2.40	100
C	Standard special non-slip wax	2.54	106
D	Resin emulsion—non-slip	3.07	128
E	Resin emulsion—very non-slip	3.34	139

Since the slip resistance of the waxes is to some extent dependent on such factors as age of film and relative humidity, the test should always be made on a comparative basis. We use our regular standard wax as the reference sample in assigning to it the value of 100. Before making the test the machine must be run for a period of about 10 minutes to warm it up thoroughly. It must be of two brush construction so that it will stay in one place. The handle should be laid in a horizontal position so that the weight on the brushes is constant. While the brushes should be cleaned occasionally, any wax tracked back and forth appears to have little effect on the test, presumably because the brush fibers actually scratch into the surface of the wax. We have also experimented with the use of an additional 12 pound weight on the brush which increases the load, the meter reading, and the spread between the wax samples. Tests have also been made of waxes applied to plate glass which seems to increase the accuracy of the readings. The use of felt pads was tried but the results were not en-

couraging since presumably only the surface was being measured and the pick up of wax from panel to panel apparently did affect the readings materially. The polishing machine test has the advantage of being rapid and involving inexpensive equipment. In general, it seems to rate the waxes in the same order as foot evaluation and field experience. The one exception we have encountered is a wax known to

contain "Ludox"* which the test rates more slippery than would be expected from practical evaluation.

Whether or not a floor is safe is, to a considerable extent, a matter of opinion. We feel that our standard regular wax represents about the cut-off point based on the background of many years field experience. When tested by the Underwriters' Laboratories it had a coefficient of friction on linoleum of .53 which is not much over their minimum of .50.

We do not have any statistical data on slips and falls as associated with particular waxes. In the Bell System a record is kept of slips and falls, as well as other accidents, but they are only those resulting in lost time, and include falls on stairs and hard surfaced floors as well as waxed floorings. As a matter of fact before a wax is placed in extensive field use, it is pretty well screened by laboratory and preliminary floor tests, so that the chance of an excessively slippery wax getting to the field is pretty remote. Also it would be difficult to compile

* E. I. du Pont de Nemours & Co., Wilmington, Del.

statistics, because after two or three falls our building people, who are safety conscious, would remove the wax from the floor. Finally, it has been our experience that a wax may perform quite differently in different locations due evidently to climatic conditions. While statistics covering the whole country might indicate satisfactory performance, the areas where trouble was experienced would hardly be convincing that the wax was a safe floor dressing.

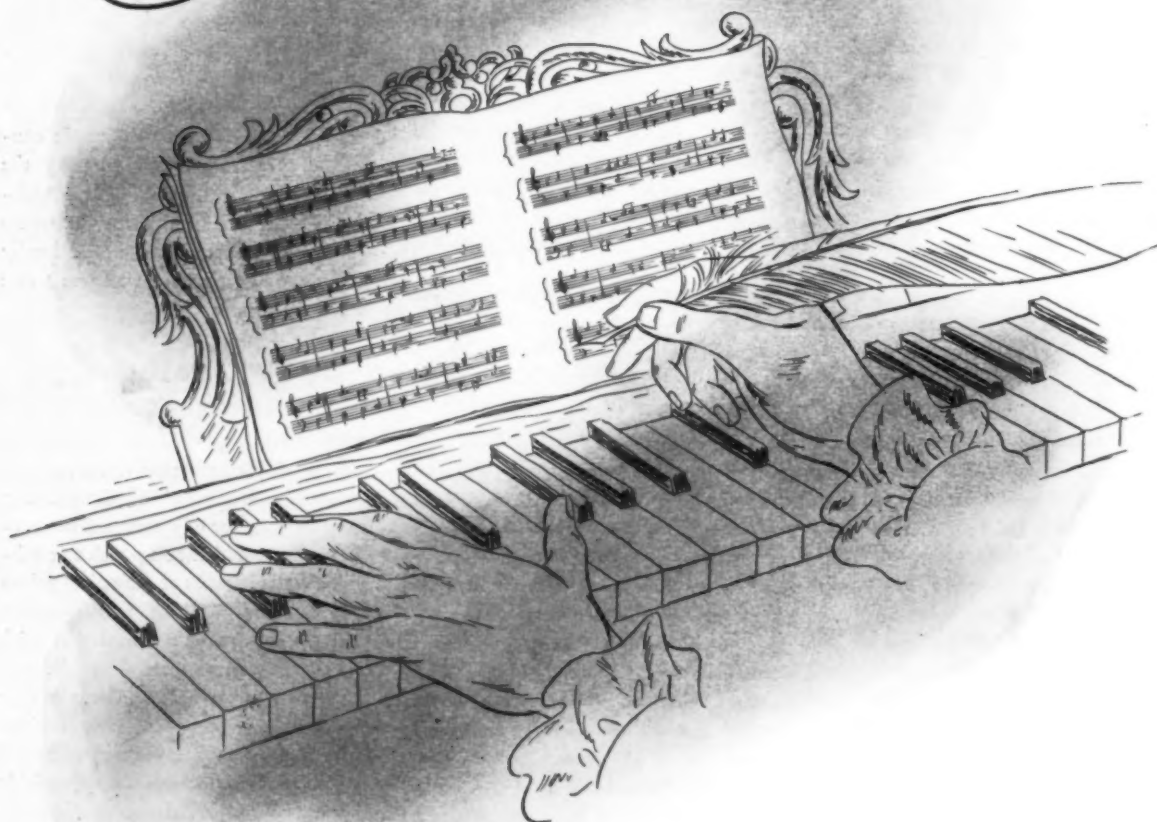
By F. J. Pollnow, Jr.
Vestal Laboratories, Inc.

THERE is the ominous implication in the remark that if we have no fundamental method of determining the safety factor of a wax in floor service, we have no basis on which to establish the significance of numerical values obtained by machine measurements. In the absence of a correlation with actual results, numerical results are, of course, meaningless. There can be no basis for the claim that a given wax is slip-resistant without an actual result study on floors or dependably correlated numerical measurements.

The challenge is quite apparent. Dependable floor or field analysis is an absolute essential.

As a so-called "technical authority" on waxes, I feel eminently unqualified to make a dependable personal observation as to whether a wax applied to a particular floor would be safe or hazardous for ordinary traffic. I am biased. My judgment is not dependable. I have both skidded and tripped on hundreds of different formulations, attempting to answer this very question. This experience has made me extraordinarily floor and wax-conscious. It disqualifies me as ordi-

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nary traffic, and I believe my fellow-experts and their associates in the wax industry are similarly unqualified.

The problem of projecting what results will be obtained with ordinary traffic is emphasized in light of the inadequacy of the expert's observation. In the usual course of development, a new wax formula is derived by successive improvement of a large number of formulas prepared in the laboratory. The promising formula is then subjected to numerous tests to determine whether such important properties as gloss, levelling, water-resistance, stability, and the like meet the particular requirements. In some laboratories, these tests include measurement of antislip coefficients with mechanical instruments. Somewhere along the line, the wax is applied to the manufacturer's office floor where it meets the tests of the talented feet of most everyone from the president to the girl in the billing department. They like it. It doesn't seem slippery. In fact, it provides good traction under foot—or, I should say, under their feet on their office floor. So far, there has been no test for ordinary traffic.

Having passed the office test, the wax may be tried on the floors of several other floors in the manufacturer's locality.

Regrettably, the evaluation is sometimes concluded at this point and the product becomes a full-fledged addition to the manufacturer's line. Under such circumstances, the wax can easily "backfire" in consumer hands by not living up to the glowing predictions assigned to it.

The method I would like to describe briefly goes one big step farther after the manufacturer's own tests. For want of a better term, let's call it a "Mass Sample Technique", which has probably been used, at least in part, by many wax manufacturers. In our experience, it is the most dependable and successful method of predetermining performance of the product when it reaches the market. Simply, it consists of testing the product in use on the floors of a selected group of consumers. The group is necessarily limited, but it must be

adequate, and the types of consumers must be selected so as to provide a representative sample of the manufacturer's overall market. Standard statistical methods applied to the manufacturer's own sales picture will reveal whether or not the proposed sample is truly representative of the manufacturer's overall market.

The sample should be judged by at least four criteria:

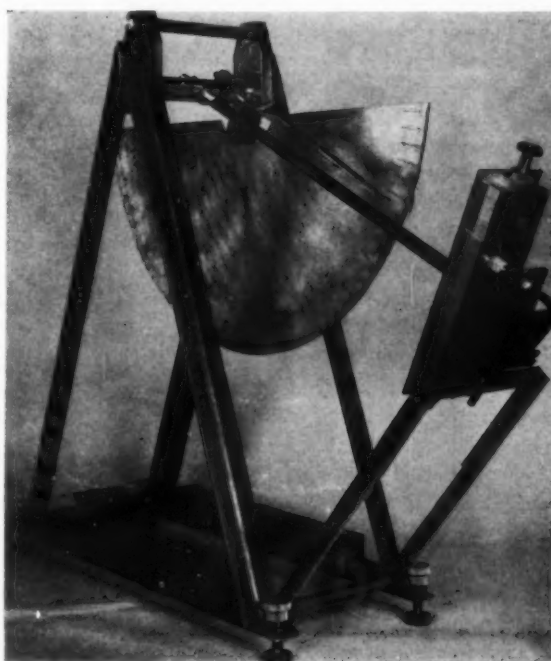
- 1) Is there geographical representation of the total existing market or potential market of the manufacturer? This is important because of local variations in climate, soil, and customer's requirements. Most manufacturers know that a wax can be quite free of complaints of slipperiness in one geographic area, while quite unacceptable in another.
- 2) Are the various common flooring surfaces represented? We all know that the nature of the floor has a tremendous effect on the slipperiness of the applied wax film.
- 3) Is there adequate representation of customer types in relation to the nature of the traffic on their floors? The traffic pattern in a

hospital obviously requires a different surface than that of a dance floor. (If the effect of the usual stimulants on equilibrium is to be considered, perhaps the dance floor should have the greater traction.)

- 4) Does the customer have a suitable standard of comparison? This should be another wax, the service properties of which are well known to both the manufacturer and the customer. Service properties of waxes, particularly slip-resistance, are difficult to describe unless the description is by comparison with another wax. Preferably the comparison wax should be one supplied regularly by the manufacturer to the particular customer in order that both are familiar with its properties.

There may be other criteria which are peculiar to an individual manufacturer's operation, but these listed are deemed essential.

Having selected the sample of representative customers, then comes the big job of obtaining their cooperation. For this, you must have your salesmen's cooperation. The sales force at large, or preferably, the more expe-



The "Walk-Way" surface slip tester of P. A. Sigler of the Bureau of Standards.

rienced salesmen, whose reports are known to be dependable, are informed of the new experimental product. Its anticipated performance is stated as accurately as possible. The salesman is asked to solicit the cooperation of several of his wax users, who are again selected either by the manufacturer or by him to provide the required representative sample. The information specifically desired is clearly outlined, preferably with a questionnaire form, so that the returns will provide uniform and readily classified information.

It is important that the customer be advised correctly that the wax is an experimental wax designed to improve the slip-resistance or other properties of the wax he has been using. It is also important that an adequate quantity for application to a reasonably large floor area be provided. Usually, five gallons is ample. For the purposes of the test, it is not important that the wax be supplied gratis or at a charge. In our opinion, it is preferable not to charge in acknowledgment of the customer's cooperation.

The balance of the program is evident. On a call-back, usually after several call-backs, the salesman gets the desired information and reports it to his company. This information is then analyzed by statistical methods for the final evaluation and decision. The salesman should get a report of the final tabulation in return for his efforts, and to let him know that the information was valuable and put to good use. This will do much to encourage his future cooperation.

In our experience, the results of the Mass Sample Technique have been virtually fool-proof. It should be attempted only infrequently and then only with exceedingly-promising products, as there is the danger of presuming upon the patience of your customers and of your salesmen. However, it is not a radical procedure, as it is practiced widely by sales-development departments of large corporations, particularly in the chemical industry.

In summary, several points are worth remembering. The customer sample should be representative of the

manufacturer's overall market or potential market. State clearly the information desired and reduce it to a minimum. Wax performance in reference to slip-resistance or other qualities is difficult to describe. It is best stated by comparison to a wax they have been using. Also it is quite important that the manufacturer be familiar with the general performance and field acceptance of the product used for comparison. And, finally, the salesmen and the cooperating consumers should know what is being attempted.

The results obtained allow the manufacturer to proceed with assurance in developing sales on the new item. They will be invaluable to the technical department for the purpose of correlation to numerical values obtained with mechanical instruments, thus leading to a clearer understanding of the significance of the numerical results.

The Mass Sample Technique is a lengthy, tedious and expensive method of evaluation. Ultimately, we can hope to eliminate it through refinements in our laboratory techniques and measurements to the end that these measurements will accurately predict field performance.

By Sidney V. James

Underwriters Laboratories, Inc.

I HAVE been asked how I would proceed to determine whether or not a given waxed floor is acceptably safe. The hypothetical case given involves a linoleum-covered corridor part of which is treated with one wax and part with another.

It is somewhat difficult to describe the procedure I would follow. A demonstration would make it much clearer but I shall try to put it in words. I should extend one leg, say the right one, as if to take a step and place the sole (not the heel) of the right shoe on the walking surface to be tested. Then I should start to make the motion of walking by pushing with the left foot and at the same time lunging the body forward so as to swing more of my weight onto the sole of the right shoe. In this way the

right shoe is in stationary contact with the floor and the forward lunging motion not only brings more and more weight onto the shoe but it also applies a horizontal forward force tending to slide the shoe. This procedure, in effect, places weight on the shoe and at the same time tries to slide the shoe from a stationary contact.

Using this technique I have found that I can distinguish readily between different waxed surfaces. By varying the effort applied to slide the shoe, I believe I can form a qualitative opinion or estimate as to which of the two waxed surfaces under consideration in this discussion offers a greater slip resistance.

Ability to judge whether or not either one of the waxes offers enough slip resistance to be considered acceptably safe can be developed only by practicing the method on a wide variety of floors under different conditions. Obviously the more slippery a floor the easier it will be to cause the shoe sole to slide. Abrasive grit floor plates on the other hand might present such a high slip resistance as to make it impossible to slide the shoe in this way. Somewhere between the abrasive grit resistance and a highly slippery floor there will be a condition which may be judged to be acceptably safe.

It will be realized that the proposed technique is based on a definite notion as to the mechanical nature of the walking process. In my opinion, based on a number of observations, walking is essentially a static or stationary contact process. To be sure the contact area of the shoe is changing in a kind of rolling or rocking forward on the walkway surface as the step is being taken. But the momentary contact is stationary relative to the walkway just as the momentary contact of a tire on a rolling automobile wheel is stationary on a dry street. There is no horizontal slipping or skidding motion taking place.

The correctness of this idea may be judged by getting people to walk across a floor on which has been sprinkled a light dusting of chalk dust or flour. Examine the foot prints closely. Note how clear and distinct

(Turn to Page 151)

Disposable Insect Cages

By Philip J. Spear

Dept. of Entomology
University of Massachusetts

DEVELOPMENT of highly potent residual insecticides has created many difficulties where cages used for holding insects during or after tests have become contaminated. Decontamination, when successful, is often expensive as well as time consuming. This paper describes the construction and use of two cage types: a fabric cage in which houseflies or German roaches may be exposed to vapors or aerosols, and a cup cage for confining small insects near residual deposits. Both are sufficiently inexpensive that they may be discarded after use.

The fabric cages* (Fig. 1) are constructed of tarlatan cloth and cardboard such as that used for furniture or light grocery cartons. The fabric is selected both for uniformity of mesh and weight of sizing. If the mesh is not regular, openings may occur through which insects such as houseflies may escape, or on the other hand, the fabric may be so dense as to cause irregular interference with passage of air-borne insecticides. The sizing should be as heavy as possible, as it is largely responsible for the rigidity of the cage. The tarlatan is sewn by machine into nearly rectangular bags, each of which is then stapled to a cardboard end. These ends contribute rigidity to the fabric cages and permit installation of a simple, workable door which is held closed by friction alone. The ends and their doors are cut on a trimming board, by the operations listed below and illustrated in Figure 2:

1. Cut A-B; 2. Fold back flap ABCD; 3. Cut B-G; 4. Cut E-F; 5. Staple together side cut at A-E.

Preferably, the staples are un-

* The fabric cages were suggested in 1948 by H. Gumprecht of American Aerovap, Inc. and the procedure for cutting the doors in the cardboard ends was devised by Hsiu-fu Chao.

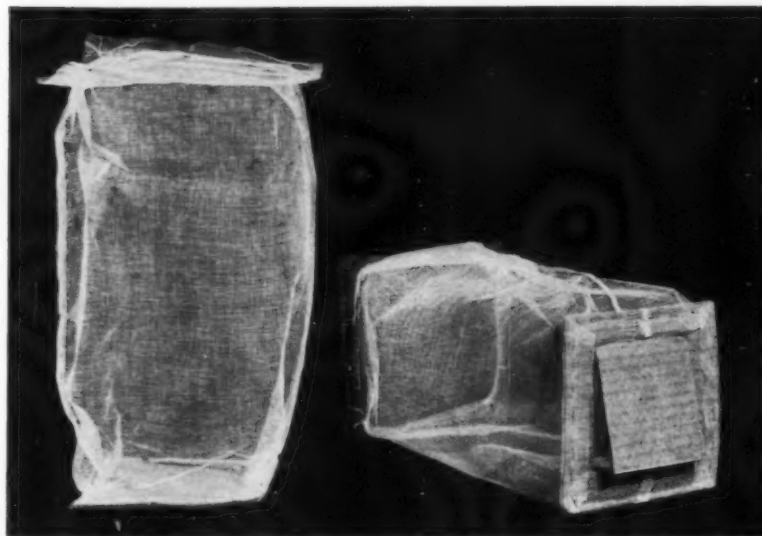


Fig. 1.—Fabric cages: at left as used; at right, showing open door in cardboard end.

dulated (Clipper, No. 700, supplied by Union Sales Co., Chicago) and are attached with a pliers-type stapler.

The dimensions of the assembled cages, illustrated in Figure 1 are $6\frac{1}{2} \times 6\frac{1}{2} \times 14$ inches. The cages may be folded for storage by depressing the side opposite the seam and laying both ends down to the seamed side.

At both the fabric and cardboard ends, the protruding border of free material permits the cage to be

picked up without touching the portions of the cage which the flies can contact. This feature is of considerable importance in avoiding contamination. The border of free fabric also aids in transporting the cages as a paper clip can be thrust through the corners of four cages and then suspended from a wire coat hanger. By this means, 16 expanded cages containing flies can be carried by three coat hangers in one hand without touching the areas of any cage accessible to the flies.

The cardboard ends are likewise useful for recording emergence dates for the flies as well as cage numbers and other essential data. In addition, they serve as protective bases so that a cage can be set on end (Fig. 1) even on contaminated surfaces, to expose the maximum fabric surface for the passage of vapors or aerosols while preventing the flies from reaching any object outside the cage.

When the cages are used for

(Turn to Page 153)

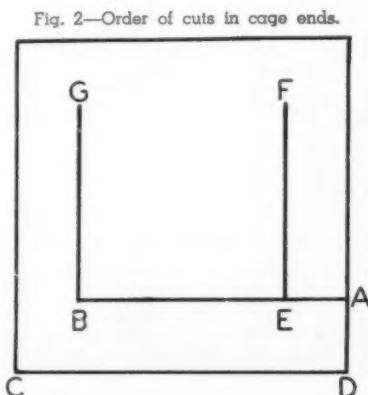


Fig. 2.—Order of cuts in cage ends.

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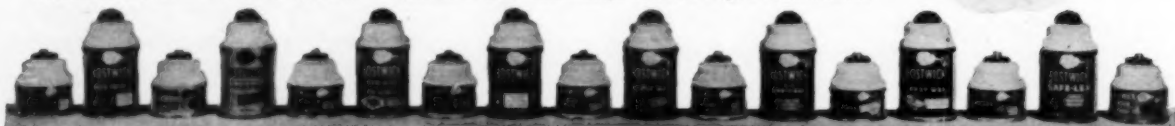
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Disinfectants for Tuberculosis Hygiene

PART II

FORMALDEHYDE is a potent disinfectant and may find some use in tuberculosis hygiene. Our experience is limited but we found that in the screening test a 3.7 per cent solution was sufficient to prevent subsequent cultural growth after 5 minutes exposure while 0.37 per cent required 6 hours to cause complete suppression. Exposed to dried sputum films, 0.37 per cent in one hour, 3.7 per cent in 5 minutes and fumes from 37 per cent formaldehyde in a confined space for 5 minutes completely prevented growth in subsequent culture. Formaldehyde has the disadvantage of being corrosive to the skin, odorous and rather undependable as to potency after standing. It has a possible field of use in the sterilization of

*Before C.S.M.A. 37th Midyear Meeting, Chicago, April 30, 1951.

instruments and here it would seem that 3.7 per cent strength or confined fumes from fresh 37 per cent formaldehyde should be adequate.

Pine Oil

IN THE course of our studies we have tested pine oil ("Yarmor 302," Hercules Powder Company) and several pine oil-soap mixtures. In the screening test a 1 per cent suspension of pine oil in water resulted in complete suppression of growth, while 0.1 per cent failed. Pine oil-soap mixtures including "Royox" (Royce Chemical Company) "Hexol" (Hexol, Inc.) and "Pinuseptol" (Eli Lilly & Company) were effective in the screening test at a dilution of 1:100. "Hexol" was also tested against dried sputum

films where it was effective at a dilution of 1:100 but not at 1:1000. It would seem that these preparations show no advantage over the cresol mixtures. The odor which is pleasant at first is very persistent and becomes quite tiresome.

Mercurials

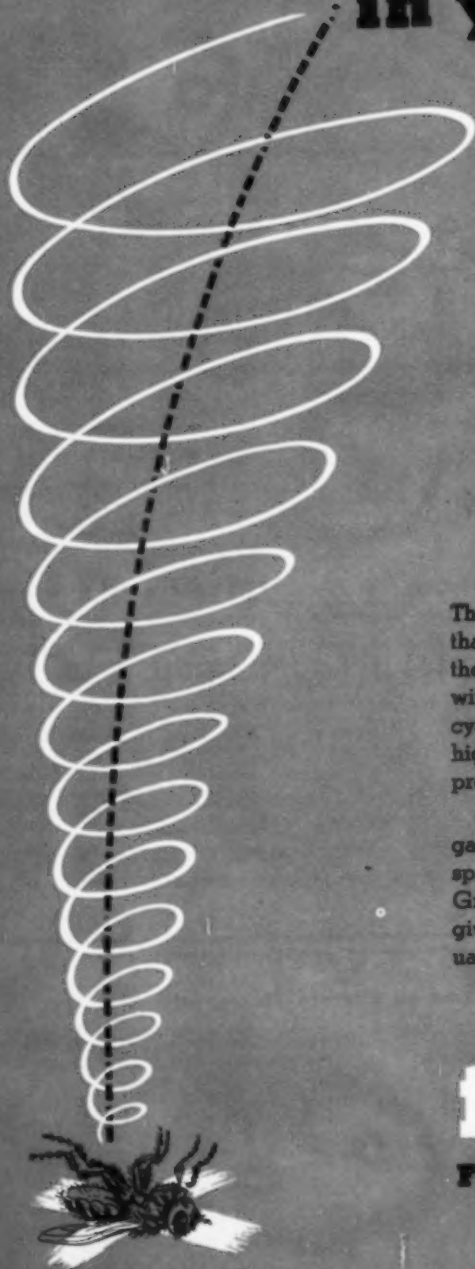
TABLE 4 shows the results of our experience with some of the mercurial compounds recommended for antiseptics and disinfection. I should like to point out the poor showing of "Metaphen," mercury oxycyanide and "Mercurophen." Mercury oxycyanide has been and occasionally is still used for the sterilization of cystoscopes, instruments introduced into the bladder for examination and treatment.

TABLE 4
The Results of the Screening Test on Certain Mercurials

Designation	Source	Composition	Complete Growth Prevention at		Failure at	
			Dilution	Time in Minutes	Dilution	Time in Minutes
Mercuric chloride			1:1000	10 min.		
Metaphen	Abbott Laboratories	4-Nitro-3-hydroxymercuri-O-cresol			1:500	2 hrs.
Mercury oxycyanide			1:100	30 min.	1:100	20 min.
					1:1000	6 hrs.
Mercurophen	Sharp & Dohme	Sodium oxy-mercury-O-nitrophenolate			1:2000	1 hr.
Cystan	American Cystoscope Makers, Inc.	Phenylmercuric acetate	1:3800 1:38,000	5 min. 1 hr.	1:38,000	30 min.

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It has also been used for thorascopes, similar instruments introduced into the chest for examination and surgery. The latter instrument is used most frequently on tuberculosis cases while the former will be used on cases of tuberculosis of the urinary tract and kidneys occasionally.

Possibilities for Improvement

THE ideal disinfectant for tuberculosis hygiene should be highly potent, cheap, not inactivated by foreign substances, not injurious to humans or to the contaminated objects and relatively odorless. Considerable improvement has already taken place in the use of the non-odorous phenolic soap mixtures. It would seem likely that the phenol group deserves further exploration. The various alkyl-, chloro- and alkylchlorophenols might well be investigated for their activity against tubercle bacilli. Another interesting group is the alkylamines.

The Alkylamines

IN OUR recent study of the anti-tubercle bacillus activity of surface-active agents(14), except for one other preparation, the alkylamines were the only compounds that showed promise as disinfectants. Subsequent studies of this group have been mostly concerned with tetradecylamine ("Armeen 14 D," Armour and Company). This compound caused complete growth suppression, frequently, at a dilution of 1:1000 in the screening, dilution, dried sputum smear and sputum smear dilution tests. Films dried from 1 per cent "Armeen 14 D" prevented the subsequent growth of added tubercle bacilli.

"Armeen 14 D" forms a milky suspension in water. It is possible to bring it into solution by the use of 7 parts of "Triton X-100" (Rohm & Haas Company) or with 10 parts of "Ethofat C/25" (Armour and Company), at considerably added cost. Solution is promoted by the addition of acid, but, unfortunately, the resulting compounds are of relatively low potency. Table 5 shows that as increasing amounts of hydrochloric acid are added to solutions of tetradecylamine, the antitubercle bacillus activity diminishes.

TABLE 5
The Effect of Hydrochloric Acid on the Antitubercle Bacillus Activity of Tetradecylamine

HCl Per Cent of tetra- decylamine, molar basis	Mean colonies of tubercle bacilli				
	Dilution of tetradecylamine				
	1:100	1:300	1:1000	1:3000	Control None
2	0	0	3.5	55	10
5	0	1	1.5	10	175
10	0	.5	30	125	150
25	0	2	25	60	135
50	.5	10	50	60	100
100	1.5	7.5	.5	1.5	7
125	1	.5	6	1	3
Control Water					183

Furthermore, the growth suppressing action of "Armeen 14 D" was diminished with increase in the mass of tubercle bacilli present, as shown in Table 6. The activity of "Armeen 14 D" is also diminished by human blood serum. Thus a 1:200 solution is not completely suppressive for tubercle bacilli in the presence of 5 per cent serum but a 1:500 solution retains its potency in the presence of 1 per cent serum. The high activity of tetradecylamine against tubercle bacilli in dried sputum smears indicates that at least in some practical situations the mass of tubercle bacilli and the naturally present protein are not sufficient to interfere with its effectiveness.

Another difficulty with "Armeen 14 D" is that on exposure to air it deteriorates with the development of a surface film. The film is a

carbamate resulting from combination with carbon dioxide.(25) Tests indicate that air-exposed solutions of 0.1 per cent strength lose their potency in between 4 and 7 days while 1 per cent solutions are still effective at 14 days.

We are not yet sufficiently satisfied with our knowledge of tetradecylamine and the other alkylamines to recommend them for practical disinfection. We are not certain that their action is truly bactericidal. To test further this point, an attempt was made to stop the action of the tetradecylamine at the end of the 10 minute exposure period by the addition of acid. Acetic acid in somewhat greater than molar equivalent amounts failed to diminish the antitubercle bacillus effect.

Support for the bactericidal ability of the alkylamines against non-

TABLE 6
Effect of the Size of the Tubercle Bacillus Inoculum on the Suppressive Effect of Tetradecylamine

Dilution of tetradecylamine	Growth suppression in per cent				
	Mass of T.B. inoculated, in mg.				
	0.0001	0.001	0.01	0.1	1.0
1:100	100	100	100	100	100
1:200	100	100	99.9	99.5	90.0
1:500	100	100	99.0	98.8	90.0
1:1000	100	99.7	99.8	90.0	25.0
1:2000	97.9	90.0	92.0	32.5	0
1:5000	58	70	0	0	0
1:10,000	0	0	0	0	0

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acid-fast bacteria is given by Harwood (26) using conductometric methods. (27) An assessment of the place of tetradecylamine and the other alkylamines, as disinfectants in tuberculosis hygiene awaits further study.

Summary

1. Tubercle bacilli are generally tougher, often react differently to disinfectants and different types of tests are required to determine their survival.
2. Every preparation recommended for tuberculosis or general disinfection should be tested for its killing action against virulent tubercle bacilli.
3. The phenolic soap mixtures at present have the greatest sphere of usefulness in tuberculosis hygiene.
4. The non-odorous phenolic preparations appear preferable to the offensive cresol-containing mixtures.
5. Dried films of the phenolic mixtures do not appear to have a protective effect against tubercle bacillus contamination.
6. Alcohol is perhaps second in usefulness to the phenols.
7. Of no value as disinfectants for tuberculosis hygiene are almost all surface-active agents, including soap, washing detergents, and quaternary ammonium compounds; some mercurials; and some phenols.
8. The alkylamines are possible disinfectants but more study is required to determine their place.

Table 7 outlines a suggested choice and use of various disinfectants.

Acknowledgement

THE following persons have aided in the studies that are the sources of the material presented: Hisako Nishihara, M.A., Eleanor Baldwin, B.A., Arthur H. K. Djang, M.D., Milton C. Kloetzel, Ph.D. and Cyrus O. Guss, Ph.D. Appreciation is expressed for the suggestions of Doctors M. R. McCorkle and H. J. Harwood of Armour and Company, Research Division.

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TABLE 7
Contamination Situations and Suggested Choice of Disinfectants

Contamination Situation	Choice Disinfectants
Heavily contaminated, enamel, metal and glassware	Phenolic Soap Mixtures
Bedside and other contaminated surfaces and articles	" " "
Floors and other large surfaces	" " "
Linens where heat is not useable	" " "
Plumbing installations	" " "
Gross spills of infected material	" " "
Thermometers	Alcohol, Mercuric chloride
Instruments	Non-odorous, non-rusting phenolic soap mixtures; formaldehyde; alcohol
Skin	Alcohol, tincture of iodine, mercurials

a little

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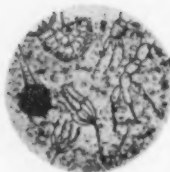
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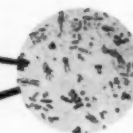
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Slip Resistance

(From Page 142)

they are. Even the print of the heel is clear except at the initial point of contact which is only slightly blurred. This blurring is not very significant as may be judged by watching slow-motion pictures of the walking process. Such pictures show that the heel is in momentary contact as the foot pivots rapidly and comes down firmly and definitely onto the walkway without a forward sliding relative to the walkway surface.

When the shoe has made its contact and the walker's forward motion begins, the friction between shoe and walkway holds the shoe and enables the walking process to take place. Insufficient friction at this phase of the process will result in the walker sliding forward and possibly the foot will slip or slide out of control and a fall will result. Similarly the propelling take off thrust applied by the other shoe may result in a slip if insufficient friction is present. Think of a person walking on stilts. He can take longer strides on a rough concrete sidewalk than he can on a greasy smooth steel floor or on ice. The stilt, applied at an angle must encounter enough horizontal friction at the point of contact to prevent the stilt from sliding.

By C. W. Gurney

Liberty Mutual Insurance Co.

CASUALTY insurance companies are interested in slippery floors for two reasons. First, and most obvious, they cost the insurance companies money. Second, the policyholders look to the insurance companies' engineering or loss prevention departments for information on how to prevent every type of accident they experience, including falls on slippery floors.

On the cost side of the picture, a quick study of all accidents reported under owners, landlords and tenants coverage in hotels in two states for two years produced 561 claims, 55 of which are reported as falls on the level. Checking these by hand and throwing out the cases with insufficient information as to cause brings the figure down

to 31 or about 5% of all reported claims as falls on freshly waxed floors. These were settled with an average cost of \$118 per case.

A similar study of the accidents in department stores over a limited period and in one state shows about the same percentage by cause (5%) and an average cost of \$149 per settled case.

As accident causes and costs go, this is not the heavy item. These kinds of cases do annoy the hotel and department store out of all proportion to their cost, and the reason for this is probably their poor publicity value. There are other forms of insurance coverage such as workmen's compensation and group accident and health that bring in claims for falls on slippery floors and there are other classifications besides hotels and department stores where this is a problem. I have no figures on the frequency or costs under these types of coverage.

It is probably the pressure from policyholders that has pushed the insurance companies into the serious studies they have made of this problem, at least this is true of the Liberty Mutual Insurance Company. Many years ago in our first active consideration of this problem, we came to the conclusion that some form of slipperiness tester, one that would produce a comparative figure, was necessary in our work. This, if for no other reason than to satisfy the floor wax salesman who would not take a "no" answer based only on judgment and the way the test surface felt underfoot. They were apparently satisfied or at least convinced if you could give them a figure and show them how it was derived and what it meant.

We tried about all of the known methods of measuring the coefficient of friction between surfaces and finally came up with the form of tester we now have. I am not taking the time to describe this because it is not the purpose of this symposium to discuss the merits or otherwise of existing measuring devices. Suffice it to say that it produces a measure of slipperiness comparable only to itself but on the other hand it does give repro-

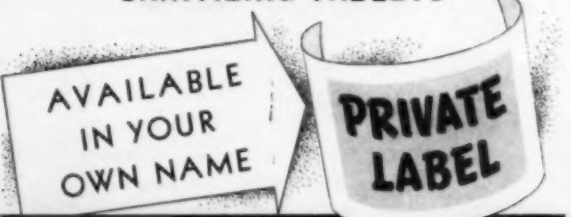
ducible results with the same materials under the same conditions.

Over the years, we have tested something over 400 trade-named floor waxes or mixtures for the same use. These tests have been put down on test floor sections in the Liberty Mutual home office building in Boston using both asphalt tile and a rather dense type of linoleum for this purpose. The two surfaces being similar in hardness and lack of resiliency, they give approximately the same answers for the same wax under the same conditions of application.

By phone, we receive requests for help—policyholders often request us to inspect their floor surfaces and express an opinion of their safety. Our tester, weighing about 20 pounds is portable so we go out to the location, take a few measurements, make a few practical observations as to the slipperiness, find out the facts of the particular finish and when and how it was applied. After this, we make our recommendations.

After a year or two's experience along these lines—and keeping records of slip readings, we made a discovery. We found there was a point—or rather a narrow range of slip value—below which some people slipped and fell and above which they didn't. We worked on the idea that there might be a dividing point or line between a safe surface and a hazardous one. Taking all the measurements we had on surfaces on which several people fell and those on surfaces where they didn't, we came up with an answer which we did not think was too arbitrary. It has been the value we have been using since and experience seems to justify its reasonableness. It is the figure I use in discussing our instrument and our opinions with wax sales representatives.

These years of testing have produced some conclusions. One is that after much experience with the machine we feel we do not need it to tell whether or not a surface is slippery. A moderately well worn leather shoe sole on the end of an experienced leg will give the answer as well as the machine. However, I am sure that we



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never would have gained this facility without much comparative experience with the slip tester. In addition to this conclusion, there are a few others of possible interest:

1. With any finishing material, a less slippery surface will be produced if the old finish is completely stripped before a new one is applied. This means a more thorough application of detergents and water than the usual maintenance crew ordinarily gives.
2. The application of two or even three very light coats with drying and buffing between each coat gives a final surface somewhat less slippery than the same amount of wax applied in one heavy application. There does not appear to be enough gain to warrant the additional work.
3. Buffing of the final surface does not change the slipperiness appreciably.
4. The slipperiness of any floor wax on test, without traffic, increases for the first several days and stabilizes itself after four or five days depending upon temperature and humidity.
5. A waxed surface, the slipperiness of which is unsatisfactory, may become acceptable after dust and dirt of ordinary traffic is worked into it. This may take from a few weeks to several months depending upon the amount and kind of traffic.
6. It is our opinion that stripping and rewaxing should be resorted to very infrequently. A surface with a fair appearance can be maintained by frequent wet moppings with one cupful of wax to a two-gallon pail of water, buffing when dry if necessary.
7. We also think that there is no point in running additional slip tests using water emulsion carnauba floor waxes on asphalt tile or linoleum. The result is going to be a slippery surface for some time after being put down no matter what is done.

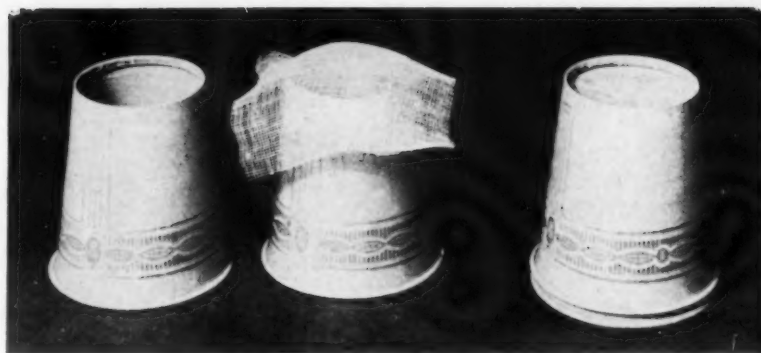


Fig. 3—Cup cages disassembled and assembled.

Insect Cages

(From Page 143)

long exposures, they are placed on their sides so that containers of food and water can be replenished. Observation of the flies is not difficult under adequate light, but is facilitated by holding the cage between the observer and a brightly lighted white object. These cages, when handled with reasonable care, will hold approximately 200 flies for at least 4 days without collapse except under conditions of very high humidity.

Cup Cages

THE cup cages are made from cheesecloth and five-ounce paper drinking cups from which the bottoms have been removed. The cup illustrated is Dixie #58 with "up-turned bottom" (Fig. 3). The bottoms are forced out with a No. 18 cork while the cup is held inverted over a plaster form. A single thickness of cheesecloth approximately three inches square is placed over the small end of one bottomless cup and is covered by a second bottomless cup (Fig. 3).

Light pressure on the outside cup forms a friction bond which holds the cups together with the cheesecloth taut between them. Any plane surface such as glass, wood or cardboard on which a residue can be established serves to complete the enclosure. The cage has a volume of 167 cubic centimeters (10.19 cubic inches) and permits the exposure of 28.52 sq. cm. (4.43 sq. in.) of surface to insects within the cage.

Flies anaesthetized with carbon

dioxide, are counted into the cages which are covered at once with the treated plates, or with clean surfaces for controls. The cages are allowed to remain in this position (small end down) until the flies have recovered and then are inverted so that the enclosing plate rests on the work table with the residue up, and the cage containing the insects is superimposed upon it. Caution is required in inverting the cages since lateral movement of the cage on the plate will alter, if not remove, some of the deposit of insecticide.

The flies are fed as necessary with milk in cotton balls placed on the cheesecloth insert. Glass plates, three inches square, are convenient surfaces on which to expose residues to flies in these cages. Five to 20 flies are used in each cup cage.

These cages have been used only in tests where high concentrations of vaporized DDT have been allowed to settle, but other applications are possible. For instance, the cages are light enough so that they can be applied to walls or ceilings with Scotch tape where residues of questionable value might require biological tests. Since the materials of which the cage is composed are readily available, comparative testing against a known residue is possible wherever a uniform supply of flies is available.

New Diversey Export Unit

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subsidiary will handle western hemisphere export sales of the company's industrial chemicals, cleaning compounds and other products. Mr. Kochs is president of Diversey International and other officers are: L. A. Armstrong, vice president; F. E. Horn, secretary; and E. A. Naughton, treasurer.

Concord Names Benedict

M. G. Benedict was recently appointed as sales representative in Illinois, Indiana and Wisconsin for Concord Chemical Co., Moorestown, N. J. He has been identified with the distribution of wax and petrolatum products in the Midwest for many years. He took a leading part in the introduction of microcrystalline waxes in that area, shortly after their development in the mid-thirties. He has conducted his own business as a refiner's representative for more than 10 years.

Baker Replaces Eddy

John Baker, recently retired from the Philippine Refining Company, has replaced Nelson Eddy as Chief of the Fats and Oils Branch of the Office of Price Stabilization. George Wrisley and Al Burgess of the Chemical Division, National Production Authority, have moved their office from U-12 to U-13, Second Floor, New GAO Building, between 4th and 5th on H Street, N. W., Washington 25, D. C.

New Trade Marks

(From Page 85)

Monarch Co., St. Louis. Claims use since Apr. 1, 1950.

MP — This for chemical preservatives for wood. Filed Oct. 9, 1950 by Monsanto Chemical Co., St. Louis. Claims use since Aug. 31, 1950.

Gyron — This for insecticides. Filed Nov. 16, 1950 by Geigy Co., New York. Claims use since July 24, 1947.

Ambrite — This for insecticidal wood preservative. Filed Dec. 11, 1950 by Chapman Chemical Co., Memphis. Claims use since June 27, 1949.

Whisk — This for liquid air deodorant. Filed Dec. 13, 1950 by Miller Protecto Products Co., Kalamazoo, Mich. Claims use since Nov. 15, 1950.

R-242 — This for pest control material containing p-Chlorophenyl

phenyl sulfonate. Filed Dec. 13, 1950 by Stauffer Chemical Co., San Francisco. Claims use since Apr. 17, 1950.

Moth-Stars — This for insecticides. Filed Dec. 15, 1950 by Van Brode Milling Co., Clinton, Mass. Claims use since Sept., 1950.

Gro-More — This for insecticides. Filed Dec. 21, 1950 by Mathieson Chemical Corp., Baltimore. Claims use since Mar. 8, 1950.

Cetox — This for floor wax. Filed Oct. 27, 1950 by Chemical Service of Baltimore, Baltimore. Claims use since Sept. 15, 1950.

Textile Det.

(From Page 55)

cellulosic fibers the effect of detergents on the tensile strength normally is not considered of importance. In the case of hand, some of the newer developments are important. Today it is possible to furnish synthetic detergents containing materials which are substantive to the cellulose of the cotton or rayon. During the washing procedure the substantive agent is drawn out of the bath and is held strongly by the cotton or rayon, thus protecting the fabric from chafe marks and furnishing a soft final hand. Apparently materials of this type, which are really blends of regular anionic detergents with certain completely new substantive softening agents, will find greater application in the future.

A Best Detergent?

IS there one best textile detergent? After all that has gone before, I believe we shouldn't have to give this answer, but this particular question has come up from time to time, and is interesting from a thought provoking standpoint. On a number of occasions, at various open discussions concerning detergents, some member of the audience has arisen and put forward this question, "If we could obtain only one single detergent, what kind would we choose"? The answers to this have been so varied that only a few can be mentioned.

Generally, an old line dyer or finisher will arise and say, "Well, if I had my choice, give me old fashioned soap. I know I could get a good scouring job with this, and if I had hard water I could always do something

about it". Then, there would usually come an answer from one of the younger men who would say, "No, if I had my choice the safest thing would be a nonionic detergent. With a nonionic detergent I wouldn't have to worry about acid or alkali, or hard waters, or precipitation with dyestuffs. If I wanted to mix any type of material in with it, whether cationic or anionic, I could get along". The supporters for alkyl aryl sulfonates, sulfated amides, and for many other types of detergents, each would have their say. Invariably though, the final conclusion would be this: We would be in a mighty tough spot today, if we didn't have the wide variety of detergents, and blends, to choose from. The increasing number of fiber types and blends, the increasing complexity of the processing problems we have to face, has meant that we must have many detergents, with many properties, in order to do our work.

How Choose a Detergent?

HOW then does one choose a detergent? This unquestionably is the \$64 question. The prize in this case, however, is satisfactory processing. We have seen that no one detergent has all the properties required to do all the different jobs in textile processing. We have seen that the problems themselves vary from the simple to the complex. We have seen that the measurement of no single property will tell whether one detergent will do a better job than another. Neither wetting, nor surface tension measurements, nor even standard soil cloth tests, will definitely tell us which to choose. Obviously, there is only one final way to choose our detergent. We must, first of all, use good sound judgment in evaluating our detergency problem. Then, we must try under actual plant conditions, those detergents or those detergent blends, which on the basis of constitution, or on the basis of satisfactory experience, (our own or that of the manufacturers), seem to have the properties that will be required. Only in this way can we hope to make the proper choice of a detergent and thus put an end to our dilemma.

MEMO TO: Aerosol Manufacturers
SUBJECT: Distinctive Formulas

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formula
for your
aerosols

You can have an improved and DISTINCTIVE aerosol formula. It will be developed for you by our experienced staff of chemists in our new, modern Port Jefferson Laboratory.

Formulas may include Allethrin, Pyrethrum, DDT, Sesamin,[®] Piperonyl Butoxide or other approved toxicants and synergists. Every formula is pre-tested, both chemically and biologically, for killing power and trouble-free characteristics.

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SERVING THE INSECTICIDE INDUSTRY FOR MORE
THAN A QUARTER OF A CENTURY.

SOAP and SANITARY CHEMICALS

Powell Advances Straube

The appointment of Harold L. Straube as operations manager of John Powell & Co., New York, was an-



HAROLD L. STRAUBE

nounced recently by H. Alvin Smith, president. Mr. Straube was formerly general manager of John Powell Chemical Co. of Huntsville, Ala., an affiliate of the parent company. In his new post he takes over the duties of managing the operations of both the Huntsville and New York plants. Morton E. Bader has been appointed acting general manager of John Powell Chemical Co. in Huntsville.

Simoniz Names Rager

The appointment of J. N. Rager as assistant advertising manager of Simoniz Co., Chicago was announced recently.

Heads Wax Importers

Rudolph E. Sievert of Frank B. Ross Co., Jersey City, N. J., was elected president of the American Wax Importers and Refiners' Association at its fourth annual meeting, held late last month. He succeeds George S. Hamilton of Innis, Speiden & Co., New York. Charles S. Bullock of Strahl & Pitsch, Inc., New York, continues as vice-president, as do John J. Garvey of Mamaroneck Chemical Corp., Mamaroneck, N. Y., secretary, and Edward Schumacker of F. W. Steadman Co.,

New York. The directorate includes Robert Freund of Cornelius Products Co., New York; F. W. Steadman of F. W. Steadman Co.; Alfred Drucklieb of Strohmeier & Arpe Co., New York and Messrs. Sievert and Bullock.

E.C.A. Commends Hyman

A certificate of cooperation was presented recently to Julius Hyman and Co., Denver, by the Economic Cooperation Administration as a special recognition for the company's part in assisting technical visitors from the Western European countries to gain a better understanding of the economy and business methods of the United States, thus helping to make the Technical Assistance Program a powerful factor in the strengthening of Western Europe. The certificate was signed by William C. Foster, Administrator of the E.C.A.

New Waxer, Polisher Tax

Floor polishers and waxers are to be subject to a new 10 per cent excise tax when the present bill, passed in the House of Representatives and approved by the Senate Finance Committee, takes effect, probably Nov. 1. Other household appliances such as dishwashers, clothes dryers, electric mangles have also been designated as subject to the new 10 per cent levy.

New Grace Pesticide Unit

W. R. Grace & Co., New York, has just announced the formation of a new division to process and sell organic insecticides under its own label as well as labels of other concerns. Charles F. Lunsford is in charge of the new unit which is making its headquarters at 2 Pine Street, San Francisco.

New BEPQ Research Unit

The establishment of the Division of Stored Product Insect Investigations, a new research unit of the Bureau of Entomology and Plant Quarantine to study control of insects that

destroy stored products was announced recently by the U. S. Department of Agriculture. Randall Latta, a veteran Bureau research man on various methods of insect control has been designated acting leader of the new division by Avery S. Hoyt, chief of the Bureau. Mr. Latta's first assistants are R. T. Cotton and Dr. Lyman S. Henderson,



RANDALL LATTA

Bureau authorities on the control of insects that affect stored products in homes and commercial establishments.

Investigations concerning insects that affect stored products have been conducted in a number of the Bureau's research divisions. The reorganization is designed to permit better coordination of the research work.

L. H. Gerson Is Dead

Lawrence H. Gerson, 63, president and founder of Gerson-Stewart Co., Cleveland, died Oct. 2, at his home in Chagrin Falls, O. He was one of the founders of the chemical specialties firm, which was organized in 1914.

Heads Grasselli Dept.

Emmet C. Thompson, who rose from superintendent of a plant to general manager of the Grasselli Chemicals Department during his 34-year career with E. I. du Pont de Nemours & Co., Wilmington, Del., retired last month. Clark W. Davis, assistant general manager of the Grasselli Chemicals Department since 1942, has been named to succeed Mr. Thompson as general manager.

NPA Appoints Hall

J. Newton Hall, vice-president in charge of sales and marketing for Julius Hyman and Co., Denver, was appointed recently by the National Production Authority to serve on its Alkali-Chlorine Industry Advisory Committee. He serves as a member until April 1, 1952.

Food Sanitarians to Meet

The annual meeting and conference of the Association of Food Industry Sanitarians is to be held at the Wilton Hotel, Long Beach, Calif., Nov. 15, and 16, it was announced recently by James B. Robinson, president.

Prentiss Coast Reps.

The appointment of S. L. Abbot Co. of San Francisco and Los Angeles, specialists since 1917 in the sale and distribution of industrial chemicals, as west coast representative of Prentiss Drug & Chemical Co., New York, was announced recently by Harold R. King, president of Prentiss.

Abbot, which has offices at 135 King St., San Francisco and 800 Santa Fe Ave., Los Angeles, as well as its own plant and warehouse in San Francisco, is representing Prentiss on the company's entire line of botanicals, drugs, pesticides such as warfarin, pyrethrum and pyrethrum products, DDT compounds, lindane, "Roten-xone," sabadilla and chemicals. Stocks will be carried in both coast cities.

S. L. Abbot, Sr., S. L. Abbot, Jr., and Robert J. Connolly are principals of the firm in San Francisco, with Milton Dyke in charge in Los Angeles.

Abbot also represents Millmaster Chemical Co., Newport Industries, Inc., New York; Hooker Electrochemical Co., Niagara Falls, N. Y., Aromatic Products, Inc., New York, and Wyandotte Chemicals Corp., Wyandotte, Mich.

Landon to WSB Post

Robert C. Landon, manager of industrial relations of Rohm & Haas Co., Philadelphia, was appointed recently to serve as a member of the Appeals and Review Committee of the

Wage Stabilization Board, according to Dr. L. W. Covert, vice-president of the company. According to Dr. Covert,



ROBERT C. LANDON

Mr. Landon is the only representative of the chemical industry on the Appeals and Review Committee, which is a selected group from various industries who have been asked by the W.S.B. to contribute their services on a part-time basis.

N. A. C. A. Meets, Elects A.W. Mohr

A. W. MOHR, president of California Spray-Chemical Corp., Richmond, was elected president of the National Agricultural Chemicals Assn. at its 18th annual meeting at the Essex and Sussex Hotel, Spring Lake, N. J., Sept. 5-7. Also elected was Paul Mayfield of Hercules Powder Co., Wilmington, N. J., who becomes vice president. The meeting, with an attendance of 425, was the largest in the history of the association. Lea S. Hitchner continues as executive-secretary.

A distinction between "toxicity" and "hazard" was made in an address by Dr. H. L. Haller, assistant chief of the Bureau of Entomology and Plant Quarantine of the U. S. Dept. of Agriculture. He said the two terms were not synonymous. "Toxicity," Dr. Haller stated, "is the capacity of a substance to produce injury; hazard is the probability that injury will result from the use of the substance in the quantity and the manner recommended." The inherent toxicity of a pesticide chemical to warm-blooded animals may have little or no direct

Profit Council Meets

Herbert F. Johnson, president of S. C. Johnson & Son, Inc., Racine, Wis., took an active part in arranging for a recent dinner, sponsored by the Council of Profit Sharing Industries, at the Hotel Pfister, Milwaukee. More than 200 business men were to attend the dinner, in connection with the council's first meeting in Wisconsin, according to Mr. Johnson. Case histories on how profit sharing by corporations has helped to increase profits and improve employee morale were to be related at the dinner, which followed a regional quarterly meeting of trustees and officers of the council at Racine. Mr. Johnson is secretary and one of the founders of the council. It was founded in 1947 by a group of companies to exchange information on profit sharing and to promote such sharing as a method of helping to preserve the American free enterprise system. Fifty companies formed the original council, which today has 400 members in 32 states and Canada, Norway and Australia.

bearing on the final food hazard," he declared, "since many of these materials are applied at a time when the edible portion of the plant has not yet been developed."

Philip H. Groggins, Chief of the Agricultural Chemicals Section, Chemical Division, National Production Authority, U. S. Department of Commerce, lauded the pesticide manufacturing industry for its assumption of responsibility for "exact and time-consuming investigations to determine the hazards of new chemicals to man or beast that might arise from the handling or application of a pesticide or from eating foods or feeds containing spray residues."

John Rodda of U. S. Industrial Chemicals, Inc., New York, was chairman of arrangements for the golf tournament and those serving on the program committee included Carlos Kampmeier of Rohm & Haas Co., Philadelphia, Dr. Alfred Weed, John Powell & Co., New York, and M. R. Budd of Hercules Powder Co., Wilmington, Del.

C.S.M.A. Annual Meeting Dec. 3-4

DISCUSSIONS of contemporary industry problems, election of officers and members of the board of governors and the laying of plans for the 40th anniversary of the association, two years hence, will highlight the 38th annual meeting of the Chemical Specialties Manufacturers Association, to be held at the Mayflower Hotel, Washington, D. C., Monday and Tuesday, Dec. 3 and 4. The five divisions of which the association is composed: Aerosol; Disinfectant and Sanitizers; Soap, Detergents and Sanitary Chemical Products, and Waxes and Floor Finishes will hold simultaneous sessions during the convention. In addition there will be two general sessions at which industry problems and association business will be considered.

The meeting opens officially on Dec. 3, but will be preceded on the previous day, Sunday, Dec. 2, by meetings of the board of governors, administrative committees and other regular committees. Advance registration and a reception will be held in the association suite on Dec. 2, also.

Program chairman for the 38th annual meeting is Melvin Fuld of Fuld Brothers, Inc., Baltimore, second vice-president of C.S.M.A. He is being assisted by program chairmen of the five divisions, including H. R. Shepherd of Connecticut Chemical Research Corp., Bridgeport, Aerosol; H. D. Lederer of R. M. Hollingshead Corp., Camden, N. J., Disinfectants & Sanitizers; James A. Green of Standard Oil Co. of Indiana, Chicago, Insecticide; Dr. H. L. Sanders of Ninol Laboratories, Chicago, Soaps, Detergents and Sanitary Chemical Products; and C. L. Weirich of C. B. Dolge Co., Westport, Conn., first vice-president of the association, Waxes and Floor Finishes. James E. Ferris of Niagara Alkali Co., New York, is chairman of the entertainment committee and Ira P. MacNair of MacNair-Dorland Co., New York, is in charge of arrangements.

The divisional chairmen and chairmen of the programs for the five divisions will preside at their sessions.

The chairmen of the divisions elected at the mid-year meeting in Chicago, Apr. 30 and May 1, take over their new duties after the first of the year, when the officers and board members elected in December will also be installed.

The meeting begins the morning of Dec. 3, with simultaneous sessions of the five divisions. Following a group luncheon, at which there will be a speaker, a general session will be held. The following morning the divisional meetings will be resumed. Again that day there will be a group luncheon with a speaker and a general session in the afternoon, which concludes the formal meeting phases of the program. A cocktail party the evening of Dec. 4 followed by the banquet and entertainment are the final events of the meeting.

A group trip through one of the government agencies may be held on Dec. 5. When the meeting was held in Washington two years ago there was a trip to the Department of Agriculture's research station at Beltsville, Md.

Alabama Pesticide Law

Alabama House Bill 470, as the state's Insecticide and Fungicide Law, was passed Sept. 12, and went into effect Oct. 1. It requires an annual registration fee of \$15 per product, with no maximum, payable Oct. 1, 1951. Another feature of the bill is an optional labeling provision for household insecticides.

Paint Assn. Names Shipman

Mitchell M. Shipman was appointed recently as executive secretary of the New York Paint, Varnish & Lacquer Assn. succeeding Werner Hayes of New York who was assistant to the president of the New York group. Mr. Shipman, who was formerly on the legal staff of the National Paint, Varnish and Lacquer Assn. in Washington, which is headed by Gen. Joseph Battley, USA ret., is making his headquarters at the offices of the

New York Paint, Varnish & Lacquer Assn. president, 316 Furman St., Brooklyn. Mr. Shipman plans eventually to make his office in New York City.

The wax products division of the New York group is continuing to function and plans are being made to expand the activities of the group which meets the last Tuesday of each month for luncheon and discussion of the industry's problems.

New Moran Name, Plant

Moran Brothers, Inc., New Haven, announced early this month that the company name has been changed to Moran Brush Manufacturing Co., and that the company next month will move to its new building at 30 Manilla Avenue, Hamden, Conn., a suburb of New Haven. The new one-story Moran plant is completely modern throughout. It is located a half mile from Merritt Parkway running between New York and Boston.

New Warfarin Folder

Issuance of a new warfarin folder, "The New Proven Way to Kill Rats and Mice—with Rodenticides Containing Newly Discovered Warfarin" was announced recently by Wisconsin Alumni Research Foundation, Madison. In addition to listing places where warfarin rat and mouse killers can be recommended for use, a number of basic questions about the rodenticide are answered in the folder. These include the chemical composition of warfarin, how it is used in bait, what effect it has on rodents, its effect on livestock, speed of kill, quantity of bait needed for the average farm, what dosage is necessary, etc. A summary of reports of county agents and the conclusions to be drawn from the reports are also covered in the six-page folder. Copies of the folder are available without imprinting for \$13.50 per thousand in lots of less than 10,000 and for \$12.50 per thousand in larger quantities. For imprinting a firm name on the back page of the folder a charge of \$6.00 per thousand in lots of under 10,000 is made, for larger quantities the cost is \$4.00 per 1000.

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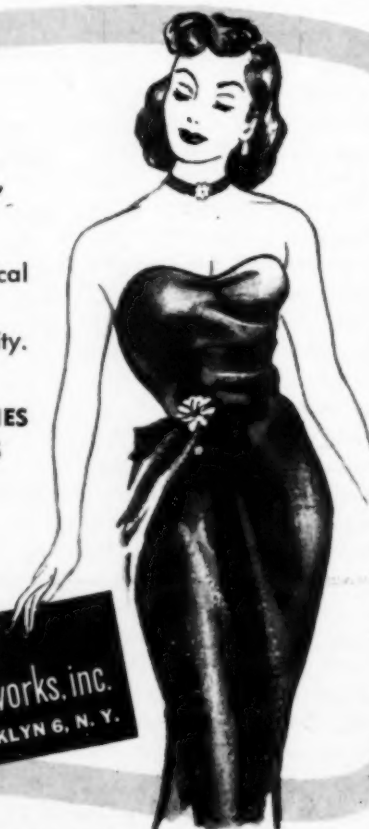
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SANITARY SUPPLIES MANUFACTURERS FOR DISTRIBUTORS — JOBBERS — WHOLESALE

New Candy Wax

Two new floor waxes containing "Ludox" colloidal silica are being marketed under the trade name "Cand-Dox," it was announced recently by Candy & Co., Chicago. The new waxes come in two grades: "#CS" and "#BB." The former is a slightly more durable and higher priced wax than "#BB" in like percentage of total solids. Both grades are made in any total percentage of solids from eight to 18 per cent and in a 24 per cent concentrate. They are sold for private brand resale exclusively.

The new ingredient "Ludox" colloidal silica is a tradename product of E. I. du Pont de Nemours & Co., Wilmington, Del., and is designed to increase the anti-slip properties of floor wax. "Cand-Dox #CS" was offered originally as "Candy's Supreme Special WR-As" in July 1950; "BB" was offered originally as "Bright Beauty Special WR-As" in June, 1951.

CSMA Meeting Abstracts

Abstracts of the papers presented at the 37th mid-year meeting of the Chemical Specialties Manufacturers Assn. in Chicago Apr. 30 and May 1, 1951 were published recently in the form of a 90-page, plus cover, 8½ x 11 inch booklet. Individual copies of the abstracts, which are mailed free to those who registered at the convention, cost \$5.00 each. There is an index, and officers and members of the board of governors of the association are listed. Papers are grouped into seven sections: the five divisions of which the association is composed, plus an administrative section and a joint aerosol-insecticide division.

For its 38th annual meeting, to be held at the Mayflower Hotel, Washington, D. C., Dec. 3-4, the Chemical Specialties Manufacturers Assn. is planning to issue a report of the meeting giving complete texts of all papers presented. The price of this will be \$7.50.

Hiller in New Post

Paul W. Hiller, formerly manager of the products development division of Innis, Speiden & Co., New York, was recently appointed New

York District manager of chemical sales for the potash division of International Minerals & Chemical Corp.,



PAUL W. HILLER

Chicago, of which Innis, Speiden is a subsidiary.

Hartzel in OPS Post

Josiah Hartzel, who has operated his own sanitary supply business for the past two years in Minneapolis, was recently named acting chief of the chemical and fuel division in the regional headquarters of the Office of Price Stabilization.

Packaging Forum Dates

"Packaging in a Guns and Butter Economy" is to be the theme of the 13th annual forum of the Packaging Institute, to be held Oct. 22-24 at the Hotel Commodore, New York. Among those serving on the program are E. H. Balkema, in charge of printing for Colgate-Palmolive-Peet Co., Jersey City, N. J., and John A. Warren of American Home Products Corp., New York. In addition, Mr. Balkema is chairman of the Package Printing seminar on Oct. 23. All phases of packaging from design, through production and raw material problems, will be covered at the meeting. Papers to be presented include "New Test for Evaluating Insect Resistance of Packaging Materials", by Dr. Willis Van Horn of the Institute of Paper Chemistry, and "Sterilization by Cathode Ray and Its Relation to Packaging" by Dr. B. E. Proctor of Massachusetts Institute of Technology.

Sees New Aerosol Use

The use of aerosol dispensers for dermatological preparations was predicted in a paper at a meeting of the American College of Apothecaries, held in conjunction with the American Pharmaceutical Association convention in Buffalo, recently. In the paper, which was presented by Professor Louis C. Zopf of the College of Pharmacy of Iowa State College, it was pointed out that the aerosol method of applying dermatological preparations has certain advantages of other methods. There is no rubbing necessary, and the medication can be directed to the desired area without applicator contact. These factors are said to make the patient cooperate to a greater extent in using the product as directed.

Maintenance Show Topics

Plant housekeeping is among the topics to be covered in 34 separate discussions at the third Plant Maintenance Conference to be held at the Convention Hall in Philadelphia, Jan. 14-17, it was announced recently. More than 100 experts, drawn from industrial firms all over the U. S., will lead the panels. An attendance of 10,000 maintenance executives is expected for the conference and show, at which 200 companies will display products and services relating to maintenance. There will be six general conferences, 27 sectional meetings and the annual banquet at the third conference and show. General conferences will consider basic problems of all industry, while the sectional meetings will be devoted to specialized subjects of interest to particular industries. General topics include "Maintenance Costs," "Planning and Scheduling of Maintenance Work" and "Training Maintenance Workers and Supervisors."

Leases Watkins Plant

A wing of the J. R. Watkins Co., Winona, Minn., building at Hillside Avenue and Peddie Street, Newark, N. J., was leased recently for a term of years to Bymart, Inc., New York, hair tinting firm. The premises, comprising 90,000 square feet of work space on six floors, represent one-half of the Watkins factory.



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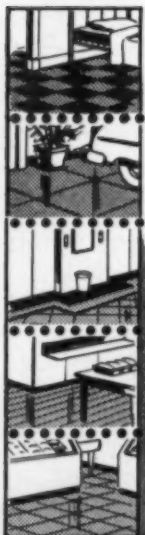
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New Canco V.P.'s

Lawrence Wilkinson and E. R. Van Meter were elected as vice-presidents by the board of directors of Con-



L. WILKINSON



E. VAN METER

tinental Can Co., New York, it was announced recently by Lucius D. Clay, board chairman. Mr. Wilkinson has resigned his position as director of the New York Civil Defense Commission to accept the position. As a vice-president, he is assistant to the chairman of the board.

Mr. Van Meter has been general manager of the company's paper container division since Aug., 1950, and is now vice-president in charge of the division. He has been associated with Continental Can since 1944 and was sales manager of the paper container section before becoming general manager.

SAACI Golf Winners

The Salesmen's Association of the American Chemical Industry wound up its golf season Sept. 11, at Montclair (N. J.) Golf Club with the largest attendance for such an affair in its history: 320, of whom 220 played golf. Percy R. Pyne of American Cyanamid Co., New York, low gross winner in Flight A, won the SAACI trophy. Other winners included:

Flight A: 2nd low gross, R. W. Daniels, Calco Chemical Div., American Cyanamid Co.; low net, C. W. French, Jr., Pfister Chemical Co.; 2nd low net, S. P. Eysman, Cellufilm Corp.; kickers, H. M. Schulman, Washine-National-Sands, Inc.

Flight B: low gross, William Wishnick, Witco Chemical Co.; 2nd low gross, C. F. Goodale, E. I. du Pont de Nemours & Co.; low net, S. B. Roberts, Harshaw Chemical Co.; 2nd low net, George Poland, Stauffer Chemical Co.; kickers, Edward Ostrander, Edward Ostrander & Co.

Flight C: low gross, J. C. Waters, Monsanto Chemical Co.; 2nd low gross, S. W. Stanton, Natural Products Refin-

ing Co.; low net, E. W. Adams, A. Gross & Co.; 2nd low net, R. H. McEachon, Dow Chemical Co.; kickers, P. E. Truesdale, Merchants Chemical Co.

Hole-in-one, L. Garner, J. T. Baker Chemical Co.; longest drive, Max Mining, Witco Chemical Co.; putting, Harry Armitage, Emery Industries, Inc.

Guest: low gross, F. Gottfried; 2nd low gross, R. Bey; low net, R. Short; 2nd low net, L. Bataille; kickers, Milton Sobel.

Door prizes, Preston Tinsely, Westvaco Chemical Div.; Webster Chase, U. S. Industrial Chemicals, Inc.; George Smith, George F. Smith & Co.; Jack Scanlon, Scanlon Wool.

Names Lynn as Advtg. Head

The appointment of James B. Lynn as advertising manager of American Floor Surfacing Machine Co., Toledo, was announced recently by W. B. Crew, executive vice-president and general manager. An advertising graduate of Western Reserve University, Mr. Lynn also studied at Toledo University, the Writing Center of New York University and the graduate school of business of Columbia University. He was previously with a New York advertising agency. A veteran of World War II, during which he served for two and one-half years with the Army, he owned and managed an advertising art business in Cleveland at one time.

Exhibit at Food Meeting

Milner Products Co., chemical specialties manufacturers, Jackson, Miss., plans to extend its sales operations into the janitor supply field, shortly, C. M. Dawson, sales manager, announced in Chicago recently. At the National Food Distributors convention there the company occupied a booth for display of two products, "Anti-K," a warfarin rat and mouse bait, and "Pine-Sol," a concentrated liquid compound which cleans, disinfects and deodorizes in one operation. Sales have previously been promoted in grocery, department stores and other retail outlets, Mr. Dawson said, and he has been looking for reliable suppliers to the janitor trade to handle the products.

Carter Sanitary Supply Co., Cincinnati, O., exhibited their 4-year-old Air-Renu, air purifying product, available in wick-type glass containers or as a spray in a collapsible plastic bottle. In charge were Allen A. Kaplan, treasurer and general manager, and Adolph B. Kaplan, secretary and sales manager.

d-Con Co., Chicago, also exhibited its warfarin rodenticide baits, with Lee Ratner, president, in charge.



New "Wizard" aerosol deodorizer of Boyle-Midway, Inc., New York, features push button control. The new deodorizer, which supplements both wick and plastic dispenser type deodorizers of the "Wizard" line, retails for 89 cents.

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Pesticides N.P.C.A. Program Topics

A PROGRAM of broad general interest designed to appeal to all segments of the industry has been arranged for the 19th annual convention of the National Pest Control Association, meeting at the Statler Hotel, Boston, Monday, Tuesday and Wednesday, Oct. 29, 30 and 31. The meeting opens with a general session the morning of Oct. 29, at which time the president's message will be read by J. Edwin Sameth, NPCA president. Other topics scheduled for discussion at this session are a "Report from Great Britain" by Neely Turner, and a discussion of public relations. A business session for NPCA members only concludes the morning session.

Simultaneous sessions, one devoted to termite problems, the other on rodent control, occupy the first afternoon of the meeting, beginning at 2:00 p.m. New termite control chemicals will be discussed by R. A. St. George of the Department of Agriculture, followed by an panel discussion of subterranean termite control, and a movie produced by the Iowa State College of Agriculture & Mechanical Arts. The other session will feature discussions of "Rodenticides of the Anticoagulant (Warfarin) Type" by Walter W. Dykstra of the U. S. Fish & Wildlife Service; "Rodent Proofing", "Dumps", and other types of rodenticides and their uses and usefulness.

Various aspects of fly control will be covered the morning of Oct. 30 in these papers: "Chemicals—DDT, Chlordane, Dieldrin, Pyrethrum plus Synergists, Lindane"; "Electric Vaporizing Fly Control Devices"; and "Other Devices for Fly Control". A movie, "Community Fly Control" is scheduled to be shown at this session.

Management clinics are on the program for the evening of Oct. 30, with emphasis on sales training, incentive plans, selection of servicemen, training aids, the new training manual, etc.

Safety in various phases of pest control work will be the theme of the session the morning of Oct. 31. Safety

control in termite control, fumigants, insecticides, such as lindane, chlordane and others, rodenticides, such as sodium fluoroacetate, warfarin, and others, as well as safety from the point of view of the Food and Drug Administration and safety measures in general will be discussed.

The final afternoon of the meeting an open meeting will be devoted to: "Irritations, Real or Imagined, Personal or Group". Following this there is to be a business session for NPCA members only to elect officers; pick convention sites for 1953, '54 and '55, and to discuss new business and pass resolutions. The 1952 convention will be held at the Rice Hotel, Houston, Tex., Oct. 20, 21 and 22.

The annual banquet will be held the evening of Oct. 31. The guest speaker being Bill Cunningham, newspaper man, author and commentator.

History of Insecticides

A brief history of the development of the insecticide industry, with emphasis on the development of synthetic organic types introduced mainly since the end of World War II, is published in the Sept.-Oct., 1951 *Agricultural News Letter* of E. I. du Pont de Nemours & Co., Wilmington, Del. The article, which is a condensation of a paper presented at the Pesticide Symposium at the Chemical Engineers Club in Washington, D. C., on Nov. 18, 1950, is published under the title, "Origins of the Modern Insecticide Industry." It was prepared by Dr. S. S. Sharp of the Grasselli Chemicals Department of du Pont.

The author sets 1870 as the date when the use of insecticides became common in America. This development was brought about by the depredations of two pests: the Colorado potato beetle and the currant worm. Paris Green was found to control the insects and remained the standard stomach poison for a quarter of a century thereafter, according to Dr. Sharp. The use of kerosene as an insecticide dates back to about 1880.

The use of the inorganics domi-

nated the picture for the first 40 years of this century, lately giving way to the new organic synthetics: DDT, benzene hexachloride, chlordane, and others. Also mentioned are toxaphene, tetraethyl pyrophosphate, parathion, EPN and pyrethrum. The importance of formulations and safety in handling of insecticides are also stressed in the article.

Heads Sprayer Assn.

R. B. Chapin, president and chairman of R. E. Chapin Manufacturing Works, Batavia, N. Y., was recently elected president of the National Sprayer & Duster Association at its sixth annual meeting. H. F. Brandt, president of Dobbins Manufacturing Co., Elkhart, Ind., was named vice-president and vice-chairman of the executive board. D. P. Lewis, secretary of H. D. Hudson Manufacturing Co., Chicago, was re-elected treasurer. Frank J. Zink and Earl D. Anderson of Frank J. Zinc Associates, Chicago, were re-elected counsel and secretary.

R. W. Merritt, vice-president in charge of sales of Root Manufacturing Co., Malta, O., was elected to the executive board. Re-elected to the board were: P. L. Hauser, sales manager of Lowell Manufacturing Co., Chicago; T. M. Burton, vice-president of D. B. Smith & Co., Utica, N. Y., and C. D. Leiter, sales manager of F. E. Meyers & Brothers Co., Ashland, O.

New Soap Wrapper

(From Page 43)

during the creation of the new wrapper were the possible adaptations of its styling to shipping cases and the soap cake itself. Even when simplified for the relatively crude printing processes used on shipping cases, "Sierra Pine's" basic new design is still powerful.

Identification on the soap is accomplished by manipulation of the new brand lettering in the same position it occupies on the wrapper. Finally, production-wise, "Sierra Pine" has gained its new sales goals without any increase in packaging cost. Its new wrappers are still an economical two-color job produced by Western Lithograph Company, Los Angeles.

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Thermal Generators Safe

The Interdepartmental Committee on Pest Control composed of representatives of the Departments of Agriculture, Interior, and Defense, and the Federal Security Agency held its regular third quarterly meeting on September 21, 1951 in Washington, D. C. This Committee agreed upon the following release relative to the use of insecticidal vaporizing devices:

"It is the considered opinion of the Interdepartmental Committee on Pest Control that there are at present no data to indicate that the use of thermal generators dispensing only lindane, DDT, or mixtures of the two, for the control of flying insects is unsafe when the following restrictions are enforced:

1. The insecticide shall be released at the rate not to exceed 1 gram per 15,000 cubic feet per 24 hours;
2. Installation shall be made only in commercial or industrial premises, mess halls, and similar locations where human exposure will be on a working day basis—not continuous;
3. The devices should not be used in homes or sleeping quarters;
4. Devices shall be so constructed that output in excess of that recommended is impossible. Fuses to protect against overloading and high temperatures, and a pilot light to indicate whether or not the unit is operating should be 'built-in' features;
5. Units should be mounted above head height and 3 feet or more from the ceiling;
6. Installation shall be such that any material which might condense on nearby equipment, walls, or ceiling cannot be dislodged and fall into or otherwise contaminate food.

Since DDT and lindane are poisons, it is the opinion of the Committee that danger will arise from deliberate or unintentional violation of these basic principles."

Approve Polak Neutralizer

Polak's Frutal Works, Inc., Middletown, N. Y., announced recently that its "Daline O.S." odor neutralizer has been approved for use in three insecticide specifications of the Army. The specifications stipulate the use of odor neutralizers, a list of which is part of each specification. Polak's "Daline O.S.," recently tested by the Office of

the Quartermaster General has been approved for use in these specifications and appears on the lists for each. The specifications include: 1.) Insecticide, Roach & Ant Control, Residual Spray Specification No. 4-117, 28 Sept. 1949, Stock No. 51-I-250; 2.) Insecticide, Liquid, Space Spray, Specification No. MIL-I-10177 (QMC), 6 Mar. 1950, Stock No. 51-I-156, and 3.) Insecticide, Liquid, Space Spray (Allethrin-DDT) Specification in preparation.

A.S.T.M. Wax Standards

In an attempt to develop standard specifications for carnauba wax, research projects have been started in order to establish accurate test data, it was announced recently by the American Society for Testing Materials, Philadelphia. Committee D-21 on Wax Polishes and Related Materials, through its Subcommittee II on Raw Materials, is undertaking a cooperative research project for detecting wax additives.

A sample of carnauba wax, to which paraffin has been added, is being sent to those members of the subcommittee who have signified a desire to participate. The test procedure to be used follows that outlined in an article entitled, "Detecting Wax Additives" by Marsel, Treacy and Godino, which was published in the July, 1951 issue of *Soap & Sanitary Chemicals*. The chairman of the subcommittee, Melvin Fuld of Fuld Brothers, Inc., Baltimore, has indicated that anyone desiring to cooperate with the subcommittee in this cooperative work is welcome.

In addition, test data are being collected on the separation of wax constituents into general chemical groups by displacement chromatography. This method was outlined in a paper by Broadhead, Gericke and Wilder, "Simple Methods for Separating Wax Constituents into General Chemical Groups by Displacement Chromatography," presented at the 37th mid-year meeting of the Chemical Specialties Manufacturers Assn., in Chicago, last spring.

A second research project which is being inaugurated involves round-robin testing of samples of carnauba wax No. 3 for determination of dirt and water. This includes the use of the ASTM Method of Test for Water in Petroleum Products (D-95).

Mothproofing Study

The question of whether there is any such thing as a "permanent mothproofing agent" has been raised by investigators at Kansas Agricultural Experiment Station, Manhattan, Kans. who have been studying mothproofing formulations. Sixteen different compounds, both commercial and laboratory preparations, were tested, including "Boconize" liquid concentrate, "Eulan N K," "Eulan C N," "Eulan N K-400," heptachlor, parathion, and formulations of DDT, DDT and chlordane and DDT and toxaphene.

As described in the Kansas station's report for the 1948-50 biennium, samples of cloth, as follows, were used in each case for biological testing; (1) treated cloth; (2) treated cloth which had been exposed for 40 hours to Fade-Ometer radiation at 100°F.; (3) treated cloth which had been exposed to five Launder-Ometer washings; and (4) treated cloth which had been exposed to five commercial dry cleanings. Biological testing was carried out for a period of 30 days with larvae of webbing clothes moths and carpet beetles.

"Of the commercial formulations tested," says the report, "Eulan C N" and "Boconize" liquid concentrate appear to have the best overall mothproofing qualities. Of the experimental laboratory formulations tested, those containing DDT alone, or in combination, gave excellent protection when applied at approximately 0.5 per cent of the weight of the fabric, as long as the fabric was not washed or drycleaned. The Fade-Ometer exposure did not reduce the effectiveness of any of the formulations. The failure of the newer organic insecticides to resist laundering and dry cleaning presents a serious obstacle to their use as a "permanent mothproofing agent."

Jameson Leaves Velsicol

A. R. Jameson recently announced his resignation as vice-president of Velsicol Corp., Chicago, to form his own company. He had been with the firm since about 1936, when it was formed. Although much of his activity was in the resin end of the business, he was active in the insecticide field, which Velsicol entered with the development of chlordane.

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New Disinfectant Specification

ISSUANCE of a new specification for a food service disinfectant, Mil-D-11309, the active ingredient of which is chlorinated melamine, was announced recently by the U. S. Army Quartermaster Procurement Office, New York. An opening on bids for the material said to run in excess of five million packets has been set for Oct. 26.

The new specification, Disinfectant, chlorine food service—Chlor-melamine, replaces JAN-C 1054, a joint Army-Navy specification, issued Mar. 28, 1949. The new specification was issued Aug. 5, 1951. It calls for a product of 21 percent chlorinated melamine (the melamine releasing the chlorine when it is wet); 11½ percent of a surface active material; 51 percent citric acid and the remainder monosodium dihydrogen phosphate, anhydrous. It is to be packaged 3.35 ounces in a plastic pouch or bag. For rinsing field service mess kits the package of 3.35 ounces is dissolved in 25 gallons of water. If the water is cold, the material is mixed with three to four parts of water in a small container and poured into the rinse water. About 100 sets of mess kits can be disinfected in this way.

For washing fresh fruits and vegetables, directions call for removing bruised and torn outer leaves and damaged fruit or vegetables. Fruits and vegetables are not to be cut or peeled before disinfection. They are washed thoroughly in a solution made by dissolving the contents of one package of the disinfectant in 20 gallons of warm water (100°F.). After washing, fruits or vegetables are to be completely immersed for 30 minutes in a separately prepared fresh solution, made by dissolving one package in 20 gallons of warm water (100°F.) and stirring occasionally to obtain thorough wetting of fruit surfaces. After 30 minutes, they are to be removed and rinsed thoroughly in potable water. The solution is not to be re-used and fresh solutions must be made up for each subsequent use.

The new disinfectant, for

which a number of companies have been invited to bid, is designed to cut down on dysentery. It has been used in bakeries and other establishments where surfaces similar to those of baking pans have to be cleaned.

Wallace & Tiernan Co., Belleville, N. J., and Monsanto Chemical Co., St. Louis, at its Merrimac, Mass., plant are reported to chlorinate melamine.

Greeff Executive Changes

The election of R. H. de Greeff as chairman and Ira Vandewater as president to succeed Mr. Greeff was announced recently by R. W. Greeff & Co., New York. Mr. Greeff has been associated with the company since 1906 when he joined R. W. Greeff & Co., Ltd., London. In 1914, R. W. Greeff & Co. was established in the United States and Mr. de Greeff became president. He is a director of Fries Bros., Inc., Bloomfield, N. J.; Montrose Chemical Co., Newark, N. J., and Montrose Chemical Co. of California, Torrance.

Mr. Vandewater was formerly vice-president and comptroller of R. W. Greeff, with which firm he has been associated since 1918, the year in which the company was incorporated in New York state. He previously had been with National Aniline and Chemical Co., from 1907 until 1918. He served as treasurer of the Chemists' Club of New York for 12 years and is a former president of the Salesmen's Association of the American Chemical Industry, Inc. During World War II he served on

the Chemical Industry Advisory Committee of the War Production Board.

New West Foot-Bath

A new type product for shower room sanitation and foot-bath use, formulated to prevent the transmission of athlete's foot, was introduced recently by West Disinfecting Co., Long Island City, N. Y. Sold under the trade name, "Showersan," it contains "Dynepal (the germicidal ingredient) and a surface active agent made by Antara Products Division of General Dyestuff Corp., New York. The basic active ingredient is iodine, rendered stable, non-irritating and non-staining when solubilized to form the special synthetic detergent known as "Dynepal." The iodine is said to be safe to use for specified purposes in the form of "Dynepal." According to the company, laboratory tests show that "Dynepal Showersan" actually kills the resistant spores of *Trichophyton interdigitale*, the standard test organism representative of the group that causes athlete's foot, in less than 15 seconds in the dilutions recommended. The product is being marketed as a preventive against the spread of athlete's foot and not as a cure for the disease.

In addition to being recommended as a disinfectant, germicide and fungicide, "Showersan" is also said to be a good cleaner for all types of surfaces. It is the first of a series of products containing "Dynepal," which are to be marketed by West. The presence of iodine in "Showersan" is obvious from the color and slight odor, according to the company, although its freedom from staining can be demonstrated quickly.

R. H. de Greeff, left; Ira Vandewater, right



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Grand Central

(From Page 137)

Actually there are more than 80 individual items in the cleaning and maintenance inventory, but they are fairly well consolidated under the headings listed:

Mops (heads) 30 and 40 ounces	\$4300
Brooms, all kinds	1000
Brushes, feather dusters	400
Liquid Wax	1850
Liquid Soap	400
Lemon Oil, furniture polish	100
Ammonia, powders	350
Ammonia soap	350
Disinfectants	90
Brass polish	313
Other cleaning fluids	2500
Sponges	1300
Scouring powders	135
Mop and broom handles	353
Pails	125
Wiping cloths and rags	5675
Steel wool	25
Mop wringers	150
Hand scrapers	10
Toilet paper	5600
White Sand	190
40 kips of chamois	1000

Materials and Equipment

In Work: For marble floor surfaces, which make up the bulk of the area, Mr. Taralico uses an ammonia powder (Ammo)—a solution of six ounces to 20 gallons of water—dispensed from 20 gallon mopping tanks—(Lawlor).

For marble walls — "Oakite No. 20" — in solution of 3 oz. to 20 quarts of water.

For terrazzo floors, which means most of the passageways, he uses, "Wyandotte Detergent F-100."

For Travertine (a volcanic stone) walls in the Graybar building passageway, liquid soap is used and sometimes when necessary "Oakite No. 20" or "Ammoline."

In telephone booths, parcel rooms, check rooms, where there are largely linoleum surfaces, a liquid soap solution — three ounces to 20 quarts of water is usually adequate.

In wash rooms, disinfectants are used — two or three types for various purposes. "Pine Tree" is used most frequently.

Substantially these are the soaps and detergents used on the different surfaces.

Physical equipment for their

applicators and for general brushing, scouring, scraping and sweeping include: dispensing tanks, (Lawlor) — wire brushes, heavy corn brooms, brooms (pushers) of strong hair construction. Vacuum cleaners of the heavy type. Over three tons of wiping cloths and rags. Mops and mop wringers, steel wool, spongers, white sand (for winter and bad weather application to slippery and busy surfaces and for receptacles for cigarettes, etc.) Chamois for the window cleaners, scrapers for the chewing gum removers. Waxing machines and countless lesser necessities.

Materials by Volume

More than a quarter of a million gallons of water (700 gallons per night) are used annually in cleaning and maintenance. And—be amused—52,000 (!) packages of toilet tissue are put in place by the crews every year! And rags—6621 pounds! But for the complete list which gives a real picture of what it takes besides management, skill and manpower to do this job, see box below.

Before concluding, it is interesting to take a glimpse at some of the surrounding operations which make up the whole fabric of Grand Central—and its Mott Haven (Millrose Central) adjunct—and the vast yards. In total, E. B. Moorehouse as Terminal manager has about 3,000 workers. Directly concerned with cleaning and building service at New York only are 211 men and women. In Mott Haven in similar capacities there are 27.

Clifford Mack's responsibilities for building service,—including rental,—comprise five floors above the railroad levels in New York and 10 in Mott Haven.

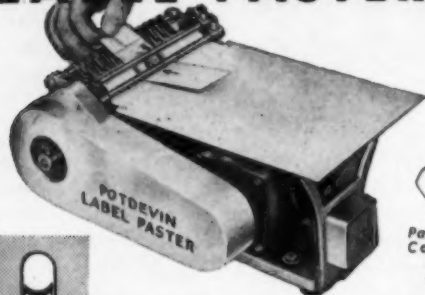
Last year, 63,446 railroad cars and 3,100 engines came into Grand Central Station. Many cars are cleaned interiorly at the Terminal. 10,644 were cars brought in to G.C.T. and then taken out to Mott Haven for service and cleaning, later being returned to Grand Central Terminal. These are called "transfer cars." 900 men, under G. A. Miller, general car foreman, clean, maintain and service cars and engines. While this operation is not a terminal cleaning function, it pertains closely to it, since much car sweeping is done at station platforms when tracks are not immediately due for a new arrival.

Exterior car cleaning now requires only one minute's work for each car. An entire train is simply pulled slowly through a triple action automatic washer—erected to span the track. Detergent is applied from the first unit, brushes by the second,—and a rinse by the third and the job is done.

Items picked up by sweepers and cleaners on floors, in 'phone booths, waiting rooms, cars, wash rooms, in the dawning hours include books, theatre tickets, railroad tickets, gloves, rubbers, wallets, purses, hats, belts, packages, un-mailed letters, earrings, buttons, umbrellas, brief cases and practically everything else.

Mops (heads) 24 oz.	1,248
Mops (heads) 30 oz.	1,716
Brooms, all kinds	462
Brushes, feather dusters	412
Liquid Wax	912 gals.
Liquid Soap	417 gals.
Lemon Oil & furniture polish	76 gals.
Ammonia Powders	25 barrels
Ammonia Soap	8 barrels
Disinfectants	114 qts.
Brass polish	313 gals.
Other cleaning fluids	58 drums
Sponges	368
Scouring powders	1,429 cakes
Mop and broom handles	353
Pails	80
Wiping cloths and rags	6,621 lbs. (3.3 tons)
Steel wool	47 lbs.
Mop wringers	12
Hand scrapers	7
Toilet paper	416 cases (52,000 pkgs.)
White sand	14,800 lbs. (7.4 tons)
Chamois	40 kips

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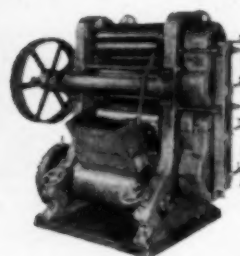
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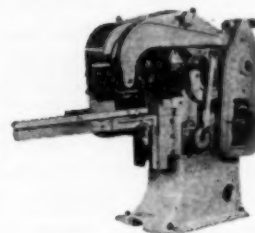


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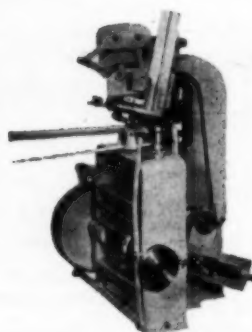


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Will Purchase—Financial group will purchase going company manufacturing line of insecticides and/or food or drug specialties with earnings around two to three hundred thousand dollars yearly. Established well-known line only considered. Purchase to be outright for cash. Give details in complete confidence to attorneys for purchaser thru your attorney or direct. Address Box 424, c/o *Soap*.

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Every effort is made to keep this index free of errors, but no responsibility is assumed for any omissions.

TALE ENDS

THE average New York male with whiskers shaves exactly 1.2 times per day. The average for other parts of the nation is 0.7 times per day,—all according to some statistics compiled by the North American Newspaper Alliance. But fewer New Yorkers are shaved by barbers than other residents of the country. Interesting indeed,—but what we would like to know is how many of these shavers use soap or other shave cream and a razor, as against these electric face mowers with which we have yet to get a smooth clean shave.

How to kill two stones with one bird,—and one bar of soap! If your wool suit is dirty, just put it on, climb in the bath tub and give it and yourself a good scrub. According to textile expert, J. Guilfoyle Williams of London, this keeps the garment in shape and cleans it well. Also you. Mr. Williams does not go into the hazards of the operation such as the possibilities of shrinkage and subsequent removal of the garment with a can opener or a chisel. Nor the possibilities that other inmates of the premises might consider the bather a trifle balmy and call the wagon.

If you've been in the habit of saying "aerosol bomb," don't do it any more or the aerosol boys will get after you. They are out to delete the word, "bomb," as far as aerosols are concerned, from the vernacular, both written and spoken. They say that this word, "bomb," dates back to the old days and gives the idea that the thing may explode which ain't so. Next time you mention an aerosol product, just say "aerosol" and let it go at that.

"Please send me a formula for a good buttermilk soap that can be made in the kitchen at home and that has good complexion properties." This request came from some innocent soul out in Arizona who picked up our name we do not know where. With all kindness in our heart, we sent him instructions as follows: "Take two pounds of fat scraps and one pint of buttermilk. Boil the fat scraps in a pint of water for two hours. When partly cool, pour over chunks of bread and feed to your dog. Drink the buttermilk. Then, go down to your druggist and buy a cake of buttermilk soap,—if he has any."

After studying the shelf displays of soaps, cleansers, polishes, floor waxes, et al, in two new large super-markets recently, we came away more impressed than ever with the necessity of strong and readily recognizable package design. If advertising sends Mrs. McGuff to market ready to buy your product, it should be quick and easy to spot on the shelf. Our studied observations are that this is not

the case in a great many products selling in this highly competitive super-market era.

Gerald N. Coughlan, Orange, N. J. soot-remover and disinfectant magnate, is America's tarpon fishing champ, we just found out from one of the N. Y. sports pages. For three years in a row, he has won the tarpon honors in Florida. Himself a featherweight, he has invariably won with a fish which weighed as much if not more than his own 130 pounds. He disdains the usual heavy tackle, uses real light-weight stuff,—and get this,—he fishes from a rowboat standing up! Possible explanation,—he was born in County Cork, Ireland.

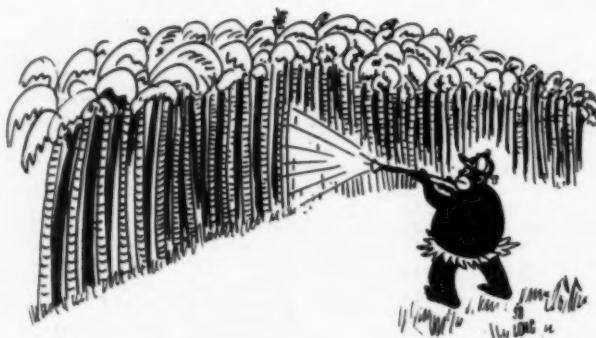
Maybe we're awful ignorant, but we just learned that Ben Franklin's old man was a soap maker. And we also learned a lot of other things from a copy of the new

booklet, "The Bath and You," put out by the Cleanliness Bureau of the Assn. of American Soap & Glycerine Producers. It tells all about bathing from the time Pharaoh's daughter took a dip in the Nile and found Moses, right up to now. It puts the kibosh on a lot of old notions about hot baths in cold weather causing colds and other nonsense. All told, an excellent sales job for good old soap and water!

With new soap plants going up all over the country, we're beginning to wonder who in tarnation is going to use the soap after it's made. Either we're going to have to get more people to use more soap, or we're going to need some more warehouses some place.

Burma Shave advertising jingles have been famous for many a year. We've read hundreds of them along the roadsides all over the country. Now, Burma Shave goes a step further, according to a news item. To the fathers of all new baby boys whose names they can get, they send a tube of their cream with the jingle: "Our whole darned factory jumped with joy when we heard you had a baby boy."

Scattershot



THAT'S like advertising directed to any old target in the hope that it may hit something . . . invariably a flop . . . whereas advertising direct to a specific target hits the mark . . . such as advertising to the field of soaps and detergents, floor waxes and polishes, insecticides and disinfectants, sanitary supplies and allied chemical specialties through the pages of

SOAP and Sanitary Chemicals

254 West 31st St., New York 1

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for bigger profits in '52
 – put **Pyrenone**
 in your formulation
 – put **Pyrenone**
 on your label



Put **Pyrenone** in your formulation to give it an unbeatable combination of advantages for your customer, the dairy farmer—

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- Pyrenone kills insects *fast*
- Pyrenone won't contaminate milk or meat with toxic chemicals
- Pyrenone is free from skin irritants and objectionable odors.

Put **Pyrenone** on your label to cash in on U.S.I.'s high-powered advertising, publicity, and promotional campaigns for Pyrenone. *Your customer*, the dairy farmer, *knows* about Pyrenone and what it can do for him. If you want to know how to go about getting permission to use the Pyrenone name on your label, just write *U. S. Industrial Chemicals Co. Division of National Distillers Products Corporation, 60 East 42nd Street, New York 17, N. Y.* Branches in all principal cities.

Pyrenone*

*Reg. U. S. Pat. Off.

In Canada: Natural Products Corporation
 738 Marin Ave., Montreal, Canada

